

HOME
Labour plans to trim MSC powers
UGC rejects restructuring proposals
Minister steps into Huddersfield
Polytechnic row
Telescope has "poor scientific record"

NORTH AMERICA
Science budget set for selective growth
Stanford president warns of tighter research competition
Civil rights groups attack tighter admission policy
McGill hosts UN air university

OVERSEAS
British students have never had it so good, claim Finns
Danish government accused of "mutilating the humanities"
Turkish army sacks 13 more lecturers
Indian state abolishes college capitation fees

ARTICLES
Paul Flather talks to the French left-wing anthropologist Maurice Godélier, and Olga Wojtas reports on a Strathclyde seminar on women's jobs
Geoff Maslen discusses the climate of ideas in Australia's universities, and Brian Morton reports on the growth of ideology in academic debate, 10
The arts and the economy: J. K. Galbraith discusses the utility of the arts, 12-13
David Leigh discusses new approach to sonnet, 14

ARTS
Brian Morton discusses the difficulty of adapting novels to film or television, and Richard Allen Cave reviews a new production of *The Bacchae*

BOOKS
J. F. C. Harrison reviews three books that recall the experiences of working class childhood, 15
Margaret Sutherland discusses the undergraduate woman (16)
David Dalches reviews a collection of critical essays by W. W. Robson (17), and John Rens discusses trade unions, the Labour party, and the law (18)

BIOLOGICAL SCIENCES 19-22
The case against creationism, genetic recombination, interferon, and nitrogen fixation are among the subjects of new books in the biological sciences

NOTICEBOARD 23

CLASSIFIED INDEX 24

OPINION 30-33
Christopher Price, MP, discusses the Government's U-turn on overseas students; "Unlucky View" from John Akker of the AUE; and David Foster-Carter of the University of Leeds, 30
Letters on the CDP, "New blood" age, Hull, and Nuffield and return, 31

Next Week

Harry Dickinson on Samuel Pepys
Iain Wright on English heroes, 14
Harry Dickinson on Samuel Pepys
Iain Wright on English heroes, 14
Harry Dickinson on Samuel Pepys
Iain Wright on English heroes, 14



HIGHER EDUCATION SUPPLEMENT
Priory House, St John's Lane, London EC1M 4BX. Telephone 01-253 3000

Mr Pym's overseas package

A half good policy is better than a wholly bad one. Forty-six million pounds of "new" money, most of which will find its way into higher education, is better than cuts and yet more cuts. In both these limited senses the Government's decision to reverse its policy on overseas students is to be welcomed. Nothing could have been more damaging than the full-cost fees free-for-all to Britain's international and trade interests and to the reputation of universities and polytechnics. Now that this mistaken policy has been if not abandoned at any rate heavily modified, it is possible to be frank. Under intense financial pressure some institutions have adopted double standards and admitted overseas students as much by their ability to pay as their ability to benefit. A few more years of this and the academic integrity of our system of higher education would have been substantially compromised.

The extra money too is welcome, although the ambiguity of Mr Pym's proposals leaves plenty of scope for a nit-picking debate about how much of it is really "new". Again it is only possible to feel grateful in a strictly negative sense. The Government is so busy engaged in taking hundreds of millions of pounds of "old" money out of higher education that it can hardly expect extravagant thanks for putting back this £46m. However, the full-cost fees policy has become a source of considerable financial instability, particularly to universities, so any reprieve, however modest and conditional, will help.

But Mr Pym's new policy for overseas students should be judged on its own intrinsic merits. There is a danger that it will be judged too positively because it has to be better than the naive and doctrinaire full-cost fees policy which it has replaced, or too negatively because in line with the Government's general policy on public expenditure it is too little, too late. What needs to be considered is whether Mr Pym's proposals add up to a coherent long-term policy on overseas students, regardless of the vices of the old policy or the precise sums of money being offered.

The trouble with the new proposals is that they only address the political issues that arise from the overseas students' question, the impact on Britain's international reputation, rivalry with foreign powers, and the implications for overseas trade; they do not even pretend to address the equally important academic issues that arise from the universities' aspirations to be international institutions of scholars and scientists and the close links of tradition and sentiment between many British

institutions and overseas universities and colleges, particularly in the Commonwealth. Yet for many within higher education the latter are more important than the former, however useful the political issues may be in persuading governments to produce extra money.

Mr Pym's plan is very much a Foreign Office package. So purely educational considerations, and rather more surprisingly trade considerations, are given little emphasis. The priority groups are apparently to be students from Hongkong and other dependent territories (after all, want to come to a British university one day), from Cyprus where Britain has historical responsibilities that are difficult to avoid honourably and the rivalry between Greeks and Turks has complicated the development of indigenous higher education, and Malaysia because the Malaysian government has made overseas students a major diplomatic issue. No one should be surprised by this pattern. These were the pressure points and it is here that the Foreign Office has felt the need to make concessions.

It can be argued that even from the point of view of the state this policy is both narrow minded and short sighted. It is a very British policy without much evidence of internationalism. The North-South dialogue is silent in these proposals. The most urgent and desperate needs of the poorest Third World countries seem to have been given little weight. It is also a reactionary policy based largely on the responsibilities of the past, rather than the opportunities of the future.

Over the past 20 years British policy towards overseas students has passed through three periods. In the first there was no policy at all; the admission of overseas students was considered the private business of the individual universities. In the second successive governments tried to negotiate with higher education a concordat which would disentangle the public from the private elements of the issue. Their instrument of persuasion (coercion?) was differential fees for overseas and home students, but their attempt failed. Higher education found it impossible to describe the internationalism to which it aspired in terms that could be translated into an operable policy, while government found it equally difficult to be clear about its own priorities with regard to overseas students. In the third period the uninhibited commercialism of full-cost fees held sway. Universities asked "polytechnics" could admit anyone they liked provided they could pay. The market would decide everything. It didn't - or if it did no one liked the results.

Art for our sake

Art would not be art if it were not controversial. So it is natural that the institutions of the arts, whether grant-giving bodies like the Arts Council or art colleges and faculties responsible for educating future artists, should frequently be embroiled in controversy as well. In recent months the troubled appointment of a new secretary general to the Arts Council, which rightly or wrongly was regarded as an attempt to elevate entrepreneurship over aesthetic considerations, and the belated attempt by Hampshire College Council to close Winchester College of Art are two prominent examples. These controversies are, in many more than in less, a reflection of the widely divergent views of art in modern society. One view is that art is the thing in itself, a process removed from the everyday mechanisms of ordinary life. Art is concerned with display, recreation, even with decoration, with other-worldliness. It is this view of

art, implicitly at any rate, which is encouraged by those who argue that the Arts Council should be more aggressive in seeking industrial sponsorship of the arts. It should not be, they say, the kind of motives that led sixteenth-century popes to patronize Michelangelo or Pope to buy Bernini, and Rodinovich to the Royal Festival Hall. However, there is a darker side. This view of art as semi-luxury consumption can lead to discrimination against it, especially at a time of public austerity. As the Winchester episode has shown, art colleges and faculties within larger universities and polytechnics can become vulnerable at a time when local authorities and institutions are being asked to make their courses more profitable.

The second view of art is that it is an essential part of everyday life, not in some remote sense of a cultivated society, but in a down-to-earth sense

of individual identity and purpose, social well-being, and economic activity. This is not just the view of long-haired community artists. It is also the view of Professor Galbraith (pages 12-13), when he argues that not only is art an important economic activity in its own right but also an integral part of the wider economy. Good art raises morale; good design sells products. Even in these practical terms art is as useful as management or engineering.

The case for protecting the place of art within higher education, of course, is much silder. The aesthetic imagination, like the moral or intellectual imaginations, cannot be imprisoned by the restricted frontiers of utilitarianism. But perhaps every local authority governing body, or academic board that casts predatory eyes over their art colleges or art and design faculties should carefully consider Professor Galbraith's arguments, translating thoughts into actions.

Laurie Taylor



UGC decision to apply upper limit of 35 to new blood appointments could be unlawful - THE SUNDAY TIMES

Well, gentlemen, that seems to be the last of our new blood interview for this morning. Shall we proceed in the usual manner? Jolly good. Just to start things off I'd like to come out pretty strongly against Swindon. That was the physics chap with the red hair and the hooded stonch jacket - the UMIST man who seemed a bit confused by my question about the value of moral education. Quite honestly, he didn't strike me as the sort of chap one would want to see in a university, let blood or no new blood.

(Murmurs of "Hear, hear.")

Possibly it was those heavy Alpine boots he favoured, but I did feel there was a certain touchiness, which didn't quite gel with me. I mean, we have to face the fact that this new blood chap is going to be a bit of a novelty for a few months. We have to be wheeled out to make a bit of polite conversation at British Council receptions. That sort of thing. And it does seem to me that in those circumstances - where we're all talking about the new information technology and the way ahead - we would do with someone who looks how could one put it, with a little more... (Murmurs of "Hear, hear.")

Neither was I greatly impressed by Turnpike. D'you remember Mel Physics again - Imperial - nervous stut - didn't seem to have heard of Matthew Arnold. Nothing much there I thought.

(Murmurs of "Hear, hear.")

And then that chappie Devizes - Fair Isle sweater under his suit - first class degree - doctorate - student articles already published - very involved in microwave or at least the govtal area. Seemed to know his stuff. And coming up to 22. Although, of course, we mustn't seem to be using age as the key factor. What we're really got to concentrate on is the actual value of the chap as an individual - and there, quite frankly, I have to say that he seemed a shade too pleased with himself. So overall, I'd be inclined to make him a good second.

(Murmurs of "Hear, hear.")

That leaves us with Douthwaite. Very impressive, I thought. Mature. Well spoken. Long list of publications. Good administrative record. And just the sort of chappie one wants to find in a university like this.

(Murmurs of "Hear, hear.")

May I then invite him in, and let him know of our unanimous decision?

(Murmurs of "Hear, hear.")

Ah, there you are, Douthwaite. Yes, do sit down. Well, I'm very pleased to tell you that after a great deal of careful thought about the matter, my colleagues and I are delighted to be able to offer you the new blood appointment. WELCOME BACK FROM EARLY RETIREMENT.

THE TIMES NEWSPAPERS LIMITED, 1984
Published by The Times Newspapers Ltd, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 228, 229, 230, 231, 232, 233, 234, 235, 236, 237, 238, 239, 240, 241, 242, 243, 244, 245, 246, 247, 248, 249, 250, 251, 252, 253, 254, 255, 256, 257, 258, 259, 260, 261, 262, 263, 264, 265, 266, 267, 268, 269, 270, 271, 272, 273, 274, 275, 276, 277, 278, 279, 280, 281, 282, 283, 284, 285, 286, 287, 288, 289, 290, 291, 292, 293, 294, 295, 296, 297, 298, 299, 300, 301, 302, 303, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 315, 316, 317, 318, 319, 320, 321, 322, 323, 324, 325, 326, 327, 328, 329, 330, 331, 332, 333, 334, 335, 336, 337, 338, 339, 340, 341, 342, 343, 344, 345, 346, 347, 348, 349, 350, 351, 352, 353, 354, 355, 356, 357, 358, 359, 360, 361, 362, 363, 364, 365, 366, 367, 368, 369, 370, 371, 372, 373, 374, 375, 376, 377, 378, 379, 380, 381, 382, 383, 384, 385, 386, 387, 388, 389, 390, 391, 392, 393, 394, 395, 396, 397, 398, 399, 400, 401, 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427, 428, 429, 430, 431, 432, 433, 434, 435, 436, 437, 438, 439, 440, 441, 442, 443, 444, 445, 446, 447, 448, 449, 450, 451, 452, 453, 454, 455, 456, 457, 458, 459, 460, 461, 462, 463, 464, 465, 466, 467, 468, 469, 470, 471, 472, 473, 474, 475, 476, 477, 478, 479, 480, 481, 482, 483, 484, 485, 486, 487, 488, 489, 490, 491, 492, 493, 494, 495, 496, 497, 498, 499, 500, 501, 502, 503, 504, 505, 506, 507, 508, 509, 510, 511, 512, 513, 514, 515, 516, 517, 518, 519, 520, 521, 522, 523, 524, 525, 526, 527, 528, 529, 530, 531, 532, 533, 534, 535, 536, 537, 538, 539, 540, 541, 542, 543, 544, 545, 546, 547, 548, 549, 550, 551, 552, 553, 554, 555, 556, 557, 558, 559, 560, 561, 562, 563, 564, 565, 566, 567, 568, 569, 570, 571, 572, 573, 574, 575, 576, 577, 578, 579, 580, 581, 582, 583, 584, 585, 586, 587, 588, 589, 590, 591, 592, 593, 594, 595, 596, 597, 598, 599, 600, 601, 602, 603, 604, 605, 606, 607, 608, 609, 610, 611, 612, 613, 614, 615, 616, 617, 618, 619, 620, 621, 622, 623, 624, 625, 626, 627, 628, 629, 630, 631, 632, 633, 634, 635, 636, 637, 638, 639, 640, 641, 642, 643, 644, 645, 646, 647, 648, 649, 650, 651, 652, 653, 654, 655, 656, 657, 658, 659, 660, 661, 662, 663, 664, 665, 666, 667, 668, 669, 670, 671, 672, 673, 674, 675, 676, 677, 678, 679, 680, 681, 682, 683, 684, 685, 686, 687, 688, 689, 690, 691, 692, 693, 694, 695, 696, 697, 698, 699, 700, 701, 702, 703, 704, 705, 706, 707, 708, 709, 710, 711, 712, 713, 714, 715, 716, 717, 718, 719, 720, 721, 722, 723, 724, 725, 726, 727, 728, 729, 730, 731, 732, 733, 734, 735, 736, 737, 738, 739, 740, 741, 742, 743, 744, 745, 746, 747, 748, 749, 750, 751, 752, 753, 754, 755, 756, 757, 758, 759, 760, 761, 762, 763, 764, 765, 766, 767, 768, 769, 770, 771, 772, 773, 774, 775, 776, 777, 778, 779, 780, 781, 782, 783, 784, 785, 786, 787, 788, 789, 790, 791, 792, 793, 794, 795, 796, 797, 798, 799, 800, 801, 802, 803, 804, 805, 806, 807, 808, 809, 810, 811, 812, 813, 814, 815, 816, 817, 818, 819, 820, 821, 822, 823, 824, 825, 826, 827, 828, 829, 830, 831, 832, 833, 834, 835, 836, 837, 838, 839, 840, 841, 842, 843, 844, 845, 846, 847, 848, 849, 850, 851, 852, 853, 854, 855, 856, 857, 858, 859, 860, 861, 862, 863, 864, 865, 866, 867, 868, 869, 870, 871, 872, 873, 874, 875, 876, 877, 878, 879, 880, 881, 882, 883, 884, 885, 886, 887, 888, 889, 890, 891, 892, 893, 894, 895, 896, 897, 898, 899, 900, 901, 902, 903, 904, 905, 906, 907, 908, 909, 910, 911, 912, 913, 914, 915, 916, 917, 918, 919, 920, 921, 922, 923, 924, 925, 926, 927, 928, 929, 930, 931, 932, 933, 934, 935, 936, 937, 938, 939, 940, 941, 942, 943, 944, 945, 946, 947, 948, 949, 950, 951, 952, 953, 954, 955, 956, 957, 958, 959, 960, 961, 962, 963, 964, 965, 966, 967, 968, 969, 970, 971, 972, 973, 974, 975, 976, 977, 978, 979, 980, 981, 982, 983, 984, 985, 986, 987, 988, 989, 990, 991, 992, 993, 994, 995, 996, 997, 998, 999, 1000.

The Times Higher Education Supplement

February 25, 1983 No 538 Price 45p

UGC considers new penalties for defaulters

by Sandra Hempel

The University Grants Committee may yet penalize universities for accepting too many students, although the announcement of the 1983/84 recurrent grants last week contained none of the threatened financial sanctions.

Because of extra money for items like inflation, pay awards and contributions to the universities' pension scheme, universities were not able to tell at a glance if they had escaped penalties.

But as calculations went on and relief set in at the seven institutions which thought they might be penalized the UGC was deciding whether to impose sanctions by cutting back the monthly payments of their 1982/83 grants.

The universities involved are Hull, Keele, Bradford, Salford, Swansea, Heriot-Watt and Dundee. A decision is expected in the next few days.

A similar UGC campaign, including a letter asking for explanations and future plans, is now being mounted against another set of universities which the UGC claims have taken too many students in mathematics.

The total grant of £1,218m announced in the House of Commons by Sir Keith Joseph, Secretary of State for Education, includes £862.13m for England, £162.95 for Scotland and £65.22m for Wales. It also includes payments such as £20m for restructuring and an extra £25m to cover the higher employers' contribution to the Universities' Superannuation Scheme, which comes into effect from April, compensation for loss of fees by the decision to hold the home under-graduate fee unchanged and extra money to cover rent increases.

It does not include the £10m new money announced in December for new blood and information technology.

Sir Edward warns universities about the need for sufficient support staff in social studies, including computer officers, and says that they should take care not to endanger research and teaching by cuts in central services including libraries.

A spokesman for the Committee of Vice Chancellors and Principals said this week that the announcement contained few surprises, and that the adjustments in student numbers were "marginal".

The prospect of a further letter on over-admissions, however, was a conspicuous feature of a scene in which universities continued to be urged to keep numbers down.

Even if we do lose national affiliation, members who take the issue seriously will have to keep up the fight in the colleges.

Mr Coal Robinson, Nuffield president and a consistent opponent of affiliation, said: "I am not really surprised."

However Nuffield remains firmly committed to "peer" and "clerical" in its national standing. Last weekend expressed total opposition to what it believed may be attempts by the Government to "conscript" local government employees including lecturers into preparation for nuclear war by increasing civil defence duties.

Put technology first, says Sir Keith

by John O'Leary

Priority must be given to science and technology in this year's planning exercise for polytechnics and colleges, Sir Keith Joseph, Secretary of State for Education and Science told the National Advisory Body this week.

In a letter of guidance parallel to that sent to the University Grants Committee last year, Sir Keith urged the use of the same criteria for planning as those laid down in his relaxed course approval arrangements introduced last June. These laid the emphasis on industrial needs and regional considerations.

"When the NAB considers the institutions plans I hope that, without neglect to the pattern of student demand, priority will be accorded to scientific and technological provision of value to industry, to the operational needs of industry, commerce and the professions, and to meeting

the future needs of employers more generally, not least at technician level," he wrote, adding "quality, cost-effectiveness, regional coverage and links between advanced and non-advanced provision as additional considerations."

Sir Keith also gave strong support to NAB's discussions on alternative patterns of provision, including increased numbers of two-year courses. "I hope that this debate will include discussions with the University Grants Committee on whether the trend towards a homogeneous higher education system with precedence given to three-year first degrees at the expense of other more vocationally orientated courses is in the best future interests of the nation," the letter said.

"As the 18-year-old population declines, it will become increasingly important for the local authority higher

education sector to develop its existing ability to cater for a range of ages through a variety of modes of attendance at different levels of study."

Sir Keith praised NAB's performance over its first year and expressed confidence in its ability to tackle difficult decisions ahead. He reminded the body that its responsibility was to plan policy taking account of the needs of local authorities and institutions affected, but within the framework laid down by central government.

Among the measures required to carry out such a policy would be a reduction in the number of lectures beyond the point which could be reached through natural wastage. "I would therefore expect authorities to make full use of premature retirement and the new arrangements for redundancy compensation," Sir Keith wrote.

In a surprise initiative, Aberdeen University court has proposed merging with its traditional rival, Robert Gordon's Institute of Technology, and also Aberdeen College of Education.

The university is to ask Mr George Younger, Secretary of State for Scotland, and Sir Keith Joseph, Secretary of State for Education and Science, to set up an independent committee to examine the educational and financial advantages of such a merger.

Neither RGIT, the education college, the university senate nor the Association of University Teachers was consulted before the proposal was made.

Aberdeen court's statement says the political parties feel there is a need to increase collaboration between universities and other higher education institutions.

Aberdeen's principal, Professor George McNicol, said: "If there are to be unions of this sort, Aberdeen is the natural place to start. The geographical remoteness should bring us together."

The court's statement continues: "The problems and opportunities are perhaps best seen in engineering, where both the university and RGIT are running courses with inevitable wasteful duplication of effort and facilities."

"The diversity and strength which would stem from a combined department or even faculty of engineering could make engineering in Aberdeen a major centre for growth, innovation and excellence in teaching and training."

Dr Peter Clarke, principal of Robert Gordon's, said he viewed the proposal with a mixture of considerable interest, pleasure and concern, concern that RGIT's special features should be a priority under whatever system we operate in future.

The court proposes merging with the college of education to create a new faculty of education. "The deliberate intention of moving into an all-graduate teaching profession would make the integration of the college with the university the logical development, here in the north of Scotland," it says.

Professor McNicol said he thought the university would validate degrees while diplomas and certificate courses would come under present external validating bodies.

education sector to develop its existing ability to cater for a range of ages through a variety of modes of attendance at different levels of study."

Sir Keith praised NAB's performance over its first year and expressed confidence in its ability to tackle difficult decisions ahead. He reminded the body that its responsibility was to plan policy taking account of the needs of local authorities and institutions affected, but within the framework laid down by central government.

Among the measures required to carry out such a policy would be a reduction in the number of lectures beyond the point which could be reached through natural wastage. "I would therefore expect authorities to make full use of premature retirement and the new arrangements for redundancy compensation," Sir Keith wrote.

News in brief

King's reunion comes nearer

The plan to reunite King's College Hospital Medical School with King's College London, came a step nearer last week with the second reading of a private Bill in the House of Lords.

The Bill, which now goes before a Lords' committee, is expected to have an easy passage although the timing is unsure. The new body will be known as King's College School of Medicine and Dentistry.

The decision is part of a rationalization scheme for medical teaching in London. While King's rejected the recommendation of the Flowers report in 1980 that it phase out its pre-clinical medical and dental course, it accepted a subsequent proposal from the University of London senate to bring the medical school back into the college. The two were separated in 1909.

Pay deal rejected

Scotland's tertiary lecturers have rejected a pay offer of 3½ per cent. But Dr Malcolm Green, spokesman for the Labour-dominated management side of the Scottish Joint Negotiating Committee, said management did not regard this as a reasonable offer.

They had been bound by government restrictions, and felt a reasonable figure, taking inflation into account, would be 3 per cent. The Scottish staff side is still pressing for its original claim of 13 per cent.

History memorial

Edinburgh University is to establish a history award in memory of Anne Lewis, a former student who died of cancer last year after a three-year illness. It is intended for undergraduates with a physical disability or handicap.

Miss Lewis graduated with first class honours in history last summer, and in October was presented with an award for outstanding achievement by Edinburgh's principal, Dr John Burnett. She died the following month.

Coronation feat

The saga of Deirdre, Ken and Mike will be riveting Scots educationists a week on Saturday. Coronation Street will be one topic at a media studies conference for lecturers and teachers sponsored by the Scottish Film Council at Queen Margaret's College, Edinburgh.

Poly first

The first course leading to an MSO in information technology has been given approval at Leicester Polytechnic by the Council for National Academic Awards as part of the Government-funded initiative. Forty students will join the one-year course when it starts next year.

HIGHER EDUCATION

That was the year that was

On December 31, 1982, *The Times* published a special review of 1982 as it appeared to the tertiary sector of education. In separate articles there were examinations of policy, universities, the public sector, unions, teachers training and the National Union of Students. Developments in science, social science, adult education and the problems of the young were also featured. Special reports on higher education in Scotland and Northern Ireland were included, and in the International section, North America, France, South Africa, West Germany and Poland. There was a sample of the year's features encompassing Sir Peter Parker on pluralism to Dr Roy Porter's analysis of the impact of fashion on the sciences.

The eight-page review has now been reprinted and is available to readers at a cost of 60p each (including postage) from the address below.

Please send your order to: *The Times* Higher Education, 1, Abchurch Lane, London EC4N 3DF.

Daresbury future more secure

by Jon Turney
Science Correspondent

The future of the Science and Engineering Research Council's Nuclear Structure Facility at Daresbury in Cheshire looks more secure as a result of an internal report put before the council at its meeting last week.

The report was produced by a committee under Professor Bill Mitchell of the Clarendon Laboratory in Oxford, set up after a recommendation last year from the Advisory Board for the Research Council that SERC should consider its future level of support for nuclear structure physics. The ABRC's 1982 forward look warned that the council might soon have three large facilities the Nuclear Structure Facility, the Spallation Neutron Source and the

Synchrotron Radiation Source which could not be fully exploited because of their expense.

The giant electrostatic particle accelerator at the heart of the Daresbury facility faced numerous problems in early trials, but is now operating satisfactorily. The committee's report says that in view of the investment already made and the unit's high scientific potential funding for the experimental programme should go ahead. However, it says this should depend on reliable operation at the target energy of around 20 million electron volts for two or three years.

The report also says there should be no efforts to develop higher energies for the time being and that some economies should be made in the

unit's current effort which cost £16m in 1981-82. It suggests that the present scientific staff of 146 could be cut by about 20.

No firm decision has been taken on the report's recommendations, which the council referred to its nuclear physics board for discussion. But the report will almost certainly pave the way for Daresbury to develop its scientific programme with the machine working in its present state.

The Nuclear Structure Facility will offer a rare opportunity for British scientists to carry out high energy experiments in particle physics without going abroad. Early experiments planned include investigations in atomic physics, decay of unstable nuclei and heavy ion reactions.

Scottish reforms hit snags

by Olga Wojtas
Scottish Correspondent

Controversial proposals for higher education from the Tory Reform Group in Scotland have been delayed because of disagreements within the group.

The proposals are understood to include a compulsory gap of at least a year between school and higher education, student loans instead of grants and ordinary degree courses being shortened from three years to two, ideas which have all run into considerable opposition.

The recommendations were expected to be sent to the Government this month, but a final paper will not now be produced until the end of March at the earliest. The executive committee has already sent the proposals back to the special education committee three times within six months.

Mr David Bleiman, regional official for the Association of University Teachers, attacked the proposals for student loans. "We would very much oppose the idea of students having to mortgage their future in order to study," he said.

And Mr Bob Maclean, chairman of the Scottish National Union of Students, said it was extremely worrying that even the Tory "wets" were beginning to talk about student loans. He also criticized the proposal to reduce the three-year ordinary degree as a cost-cutting exercise with no educational justification. "We are against any change in degrees which would result in a more cramming approach to education," he said.

But Mr Maclean said he felt a gap between school and college was a good idea. "When students discuss their own experience, many will say they had been a bit older when they went to college," he said.

Mr Bleiman added: "There might be a lot to be said for this proposal if there were opportunities for work experience or travel. However, in the present economic climate one has to consider what school leavers are to do in that year, and in Scotland the majority would presumably be unemployed and demoralized."

Mr Bleiman added: "There might be a lot to be said for this proposal if there were opportunities for work experience or travel. However, in the present economic climate one has to consider what school leavers are to do in that year, and in Scotland the majority would presumably be unemployed and demoralized."

Mr Bleiman added: "There might be a lot to be said for this proposal if there were opportunities for work experience or travel. However, in the present economic climate one has to consider what school leavers are to do in that year, and in Scotland the majority would presumably be unemployed and demoralized."

Welsh course record 'poor'

The University of Wales has a better record on Welsh language teaching than other colleges but further developments are dogged by bureaucracy and lack of finance, according to a report by students published last week.

Outside the university, the picture is even less healthy, says the National Union of Students Wales, which commissioned the research project.

Of 31 further education colleges who supplied questionnaires, only eight had any form of bilingualism. Only two offered courses which could be taken wholly in Welsh. "Welsh is clearly not regarded highly by those who administer advanced further education," the report says.

In public sector higher education apart from Trinity College, Carmarthen, and Normal College, Bangor, only six courses are available in Welsh with a further 15 with some Welsh content.

Despite the better record of the university, NUS Wales says a new initiative is necessary. Even Bangor and Aberystwyth, which have a number of degree courses in Welsh, offer no science-based courses and the other colleges lag well behind.

John Slater, president of NUS Wales, commented: "Clearly the findings of this report are horrifying for all those individuals and organizations who have devoted so much time and effort to pursue the teaching of Welsh, and they should be a warning to those who have not."

Fee concessions for immigrants rejected

by John O'Leary

Proposals for trade-related fee concessions and state scholarships to be awarded by universities and polytechnics are rejected in the Government's detailed policy document on overseas students.

The Foreign and Commonwealth Office report, *A Policy for Overseas Students*, describes its package of proposals as "the framework of a coherent and flexible policy closely geared to specific objectives." The statement closely follows the recommendations of an inter-departmental working group of civil servants which spent six months drawing up a draft response to the Overseas Students Trust report of the same name.

On the policy as a whole, the FCO report says: "It is of course possible to argue for a further expansion of the existing measures, or for other schemes of support. However, in present economic circumstances, and after a thorough assessment of the excellent work of the Overseas Students Trust, the Government considers that the policy on overseas students they are now adopting is in the national interest and in the interest of the students themselves."

Among the measures rejected are fee concessions for newly-arrived immigrants, targeted schemes under the aegis of the Government departments concerned and a programme

of awards designed to help individuals not catered for by other schemes. The report says that this last proposal raised objections on grounds of accountability if institutions were free to use public funds as they wished.

The most contentious and surprising rejection concerns the proposed trade-related scheme. Although the report says that this was dropped because discussions with industry did not make sufficient progress, it is understood that these talks involved an entirely different scheme to that proposed by the OST. Instead, the Government expects to pursue trade objectives through a small discretionary scheme to be financed by the FCO.

Although the detailed report follows the main tenets of last week's announcement by Mr Francis Pym, the Foreign Secretary, of a £60m programme of assistance for overseas students, it is less definite than was Mr Pym on the freedom of institutions to set their own fees. While last week's statement said that Sir Keith Joseph, Secretary of State for Education and Science, "was favourably inclined" towards institutional autonomy in the setting of fees, this new report promises only consultation on the issue. It claims that "Within the prevailing legal framework institutions are already free to fix their own fees."

Warning to Buckingham

A future Labour government would review the status of the University College at Buckingham, newly granted a Royal Charter, Mr Philip Whitehead, the party's spokesman on higher education, said this week.

Labour has already threatened to revoke Buckingham students' right to mandatorily awards, which was granted last year. Now the issue of the charter has created further controversy.

"Buckingham would have to be reviewed in the light of our overall plans for reorganizing higher education," said Mr Whitehead. "It was granted a charter in very premature fashion. The Council for National Academic Awards would have nothing to do with degree status for Buckingham, but this was a purely ideological decision."

He added that on any test of quality and maturity, Buckingham was less worthy of a charter than many universities and colleges. The college, which will be known as the University of Buckingham, would have to prove itself worthy of the charter and Mr Whitehead did not believe it could do so at present.

Mr Geoffrey Castoo, secretary general of the Committee of Vice Chancellors and Principals, was also critical of the ease with which Buckingham had won its case.

Lord Beloff, Buckingham's first principal, said after the official announcement of the charter last week-end he had been confident that the college could show adequate academic standards, especially after the awarding of mandatory grants allowed for a better balance between home and overseas students. His only fears had been on the Privy Council's second criterion, that of financial stability.

Leader, back page

Tomorrow the Universe

Mr William Shelton, under secretary in the Department of Education and Science, inaugurated one of Britain's most promising showpieces in information technology - Project Universe - in London this week.

Universe, the Universities' Expanded Ring and Satellite Experiment, is basically a high-speed data network using the latest programming techniques to order information passed between distant computers at high speed. It is also a leading example of the three-way collaboration between government departments, industry and universities - the DES is keen to promote.

The £3m project was first conceived to join local computer networks like the Cambridge ring system developed under Professor Roger Needham and the Science and Engineering Research Council's own satellite links between major laboratories. It now also involves the University of Cambridge, Loughborough University, GEC, Logica and British Telecom, as well as the Department of Industry.

Mr Shelton, speaking at London's Barbican Centre after opening the University of the Info '83 Exhibition, said Universe provided a model of the type of joint project which was bound to become more common, and it proved that Britain was at the heart of the information technology revolution.

The potential uses of the network were shown by two of the universities involved. University College, London, used the satellite to transmit facsimiles of documents and the Loughborough team showed their system for rapid scan and transmission of television images.

When fully developed, remote linking of local area computer networks will be a major money-saver.

Leader, back page

Call for engineering flexibility

More flexibility has been called for in engineering training. In a discussion paper published this week the Engineering Industry Training Board says that new technology will produce frequent changes in the skill requirements of many jobs.

This will mean more movement and retraining throughout engineering occupations and there should be a thorough re-examination of established training for craftsmen, operators, technicians, technicians, engineers and professional engineers, the EITB believes.

The board wants to see recognized arrangements for training to move

from one existing path to another, so that, for example, craftsmen can become technicians.

The EITB will soon publish detailed recommendations for training of technicians and graduates in industry, and will introduce a certification scheme.

A second paper published this week looks at the effect of the Manpower Services Commission's Youth Training Scheme on the engineering industry.

Development in Engineering Training and The Youth Training Scheme, EITB Information Papers 67 and 68.



Leicester Polytechnic fashion student Alison Morris, who designed this children's wear, was one of those who took part in a fashion show held to mark a new blue dye. The dye, which has been especially designed by Sandoz a Swiss dye manufacturer, for polyester fibres, is said to represent a major breakthrough in colour intensity and was teamed with a new fabric supplied by ICI Fibres.

Tories pile on pressure for more private services

by Felicity Jones

More services could be carried out by private contractors in colleges and polytechnics if Conservative-led local authorities respond to the vigorous call to privatize services which came from the party's local government conference at the weekend.

Local authorities, mainly in the north, who have been slow to take resolute action were chastised by Mr Tom King, the Secretary of State for the Environment. He said it was their moral duty to provide services for the public at an economic price by putting services out to private tender.

Birmingham had saved £2.5m in car service, even though it was authority employees who submitted the most competitive tender and made the cuts. Education scarcely received a single mention at the conference, but it is unlikely that it would be excluded from the drive towards privatization.

Professor David Smith, Opposition spokesman on the Inner London Education Authority, said afterwards that there was considerable scope to put cleaning, catering, maintenance and architect planning out to private contractors.

In response to criticisms over the way the target system for the rate support grant was punishing low-spending authorities, Mr King said he hoped the "emergency" target measures would not apply for long.

There is room for more responsibility being given to individual institutions so that they can find ways of saving money by putting services out to tender," he said.

There is only small-scale privatization at present in higher education but there are signs of change. Liverpool City Council has urged the governors of the polytechnic and City of Liverpool College of Higher Education to discuss reducing cleaning costs with the unions and get tenders from contract cleaners on a long-term basis if the talks prove unsuccessful.

The future of the ILEA, with the Greater London Council, remains undecided despite resolute calls for its abolition. Lord Bellwin, minister of state for local government, said they would have to look very carefully at the figures before taking a decision and do justice to the previous Tory administration.

In response to criticisms over the way the target system for the rate support grant was punishing low-spending authorities, Mr King said he hoped the "emergency" target measures would not apply for long.

Where Manpower falls down

by Patricia Santinelli

The Manpower Services Commission falls to use further and higher education to the best effect, Mr John Sellars, the new chief executive of the Business and Technician Education Council, said today.

Too often it resorted to short-term expedient measures which underused the total education and training capacity of further and higher education, he told the annual meeting of the Association of Colleges for Further and Higher Education in London.

"Given all the external constraints, the MSC is doing a magnificent job, but it has so far given insufficient thought to the ways in which quality control can be exercised in respect of the content, orientation and standards of the products it is promoting," Mr Sellars said.

His council was able and willing to contribute to the difficult task of defining and providing relevant products of quality to meet the immediate and continuing needs of those young people and adults whom the MSC was seeking to help.

"In partnership with the MSC and the education system the BTEC can use its combined experience and expertise in ensuring that MSC schemes offer relevant education," Mr Sellars said.

At a meeting last week the BTEC determined some initial policy both for the long and short term. It will now make a comparison of present BEC and TEC policies and produce a consultative document by the end of the year. This will go out for consultation to interested bodies for response by mid-1984 with the aim of producing a policy statement by July, and implementing it from 1985/86.

In the short-term the council intends to work towards a coordinated national provision for pre-vocational education, working in partnership with City of London Guilds.

"The council also intends to develop courses which meet the needs of employers by combining the best elements in the present BEC and TEC courses. BEC and TEC awards are to be replaced by BTEC awards from December 1983.

London threat

continued from front page
as highly charged. Some principals are totally opposed to any interference with tenure and were angry at the move. The issue now comes up for discussion at the next meeting of the collegiate council on March 14 when a decision on whether to issue a discussion document for circulation throughout the university will be taken.

Discussions on tenure, both based on the proposals of the Committee of Vice Chancellors and Principals, and through a university working party, have been going on for some months.

But Professor Quirk believes the CVCP document is over-simplified and not suited to London's special circumstances. He thinks it is essential to introduce some standardization into the university's contracts of employment and argued that by introducing redundancy clauses schools would be able to offer more security to many staff by converting temporary posts into permanent ones.

At present terms and conditions of employment vary widely in London, not just between academic and non-academic staff, and permanent and short-term staff but also between institutions.

The plan's supporters claim that if the university is forced to make redundancies in the next few years it would be unfair to select staff who are soft targets because they happen to have weaker contracts.

The discussion notes circulated at the meeting say that the Privy Council's suggestion of introducing redundancy clauses would only affect staff and that this point is not widely understood.

The timing of the proposals is likely to cause a furor among Association of University Teachers officials.

Dundee tenure under attack

There are fears that tenure is under threat at Dundee University where several fixed term appointments have recently been made. Between four and seven academics have reportedly been appointed on fixed term contracts which would normally have been standard contracts.

There has been particular anxiety over these moves within the arts and social sciences faculty, whose board asked the dean to discuss the issue with the faculty establishments and promotions committee.

The local branch of the Association of University Teachers has met members of the university court through the academic staff. Alison Berridge, AUT vice president Mr John Berridge said the meetings had been useful and constructive.

"We explained that if the national agreement on probation was applied properly, it offered the university a considerable amount of protection, since people would be on a three-year probationary period instead of a five-year contract. This point

appeared to be one which the courts' representatives thought worth considerable study," said Mr Berridge.

Also at Dundee University the students' association has made two staff redundant, and may face legal action from the unions involved, the AUT and the National Association of Local Government Officers.

'UGC will give way to direct control'

by Sandra Hempel

The University Grants Committee will be abolished in favour of direct ministerial control of university student quotas and budgets, an economist at University College, Cardiff, has predicted.

Dr Graham Hallett, senior lecturer at UCC, says the universities should respond by giving up all hope of autonomy but insisting on guaranteed academic freedom. Direct control from Whitehall would be tolerable if the institutions were able to resist the threat to academic freedom, perhaps by emulating the American system where tenure meant a job for life but was granted only in "outstanding" scholars.

"The best tactic for university representatives might be that while reserving our position on its morality, we will accept rape if it is in a reasonably civilized manner."

Writing in UCC's latest newsletter, Dr Hallett condemns what he calls the mutedness and ineffectiveness of the protests from the Committee of Vice Chancellors and Principals as well as the more radical thinking and suggests a decentralized market-oriented system of higher education.

He advocates a tax-related loan system combined with grants. Such a system combined with the removal of quotas and the granting of the right to individual universities to set their own fees could provide an escape from the "ill-considered dirigisme" into which the Conservative Government had drifted.

"The main advantage of the loan system is that it might make it possible to find our way back to a situation in which the size of universities or subjects within universities would depend on their success in attracting students and donations rather than on the deliberations of a small group of politicians or establishment academics."

Think big, art colleges are told

by Felicity Jones

The National Advisory Body, which is planning for the future of public sector higher education, is likely to look most favourably on art and design departments in colleges and polytechnics which are above a minimum size and have larger classes of students.

Dr Patrick Nuttgens, chairman of the NAB art and design working group, made these comments about future criteria as the working group submitted its recommendations.

He said there was no doubt about the demand for places in art and design and was convinced of the need to maintain something close to the present provision since the arts subjects were so intimately linked with the economic future of the country.

The interdependence of art and design meant that the unity of these two subjects should be maintained and the relevance to other related areas such as architecture, business management and production engineering had to be kept in mind.

Dr Nuttgens said that the over-provision of staff in the art and design field could not be defended, and the "leviathan" 1:4 staff-student ratio of the 1960s was no longer feasible. A ratio of 1:8 as recommended in the public expenditure white paper was most cost-effective.

But Dr Nuttgens dismissed suggestions that this would involve art colleges and departments in a larger than 10 per cent cut.

The working group is likely to fix a minimum size which will provide for "centres of excellence", below which the viability of certain departments will be open to doubt.

Applications to art colleges and departments increased by at least 75 per cent this year, according to the Association of Art Institutions in Hereford which acts as the clearing house for art and design.

Personality clash stops talks

by David Jobbins

Discussions over a call for early retirements among academic staff at Leicester Polytechnic are blocked because of a disagreement between its director and a regional official of the college lecturers' union.

It stems from a letter from Mr David Bethel, the polytechnic director and a former chairman of the Committee of Directors of Polytechnics to 50 academics eligible for premature retirement compensation appealing to them to apply to leave from the end of the current academic year.

He wrote: "In doing so you would be assisting the polytechnic and we will find PRC is not without its attractions. I do not wish to speculate on the alternative and to do so might be thought to be placing you under pressure to come to a decision."

When the letter was passed to the regional officer of the National Association of Teachers in Further and Higher Education, Mr William Hillbourne, he replied: "I find it reprehensible that you have chosen to canvass staff in this manner without first discussing it with the Naffie negotiating committee (at the polytechnic)."

When Mr Hillbourne, acting on standing instructions from his union, accompanied the liaison committee when it met Mr Bethel, he was invited to apologize for his letter.

When he refused to do so, Mr Bethel said he was not prepared to have him in his office, and the entire Naffie contingent withdrew.

Since then no talks have taken place. Mr Bethel, a member of Naffie, commented: "The regional officer wrote me a letter which was rude and based on ignorance. I am not prepared to deal with people who are rude. His letter was based on ignorance because the Naffie branch has been fully apprised of the situation."

Mr Bethel made clear his position was in Mr Hillbourne and he would be prepared to continue discussions with a Naffie headquarter official present. Meanwhile Mr Hillbourne has taken the matter with Mr Andrew Fairbairn, Leicestershire's chief education officer.

"I am not prepared to apologize or retract one word," he said this week. Mr Melvyn Pack, secretary to the Naffie liaison committee at Leicester, said they were appalled at the way the issue had been handled.

"The attempt to impose decisions from above without negotiation is reminiscent of the autocratic tactics employed by Sir Michael Edwards at British Leyland," he said.

Leicester is one of the polytechnics where the rival Association of Polytechnic Teachers has been granted negotiating rights - and Mr Bethel said the majority of people whom he had written about were not Naffie members.



Students from Bristol Polytechnic on their way to victory in the tenth inter-polytechnic business plan competition. The 11 teams, including one from Toulouse which finished third, fed their plans for a hypothetical machine tool manufacturing company into the Trent computer for expert assessment.

Distance degree at Strathclyde

by Olga Wojtas

Strathclyde University is to offer a Master of Business Administration degree by distance learning next session, the only one of its kind in Scotland.

The degree will be taught through specially prepared teaching packs, including audio-tapes, self-assessment questions, textbooks and correspondence with tutors.

There will also be an annual summer school, and several weekend schools. Professor Michael Baker, Dean of Strathclyde Business School, which is offering the degree, said: "This opens up new opportunities for managers and others who are denied normal access to higher management education."

The course is flexible enough to meet a variety of personal and professional needs and it requires the minimum absence from work. Students will be able to study individual subjects without registering for the full degree course, and can pay for classes as they take them.

Journalism professor planned

The City University is expected to agree to appoint a professor of journalism at its next senate meeting. The proposal, made by an internal working party, has already been accepted by the Academic Policy Committee whose members include Dr Raoul Franklin, the vice-chancellor, all the heads of department, and union representatives.

The university has run a post-graduate diploma in journalism since 1976. It recently added a diploma in radio, journalism, and international journalism - all one-year courses. It also runs a one-term certificate in periodical journalism and there are proposals to introduce a course in television journalism.

Demand for places far outstrips the number available. In 1981 there were 502 applicants for the 25 places. But the need to make economies in the university and problems within the course led the university to set up a working party to examine its future.

The working party considered three options: the most radical being the closure of the department, and

an and to the teaching of journalism. The second option was to continue the course as it had been going in the third that the course be promoted to the status of being a department in its own right, with a professor as director, and with pay of funding.

One major problem found in dogging the course had been pay differences between members of staff. This began as differences of opinion, but deteriorated into animosity, the report says.

The working party added that the school could not be allowed to continue as at present. The decision between staff would not change without "the introduction of a significant element in the situation."

The working party favoured a third option. There should be an appointment of a director of journalism studies at professorial level.

A person "with significant status in the profession, and his colleagues. The new department is also expected to be £20,000 re-equipped."

Call for ILEA to fund child care in polys

Officials of the Greater London Education Authority have been asked to look into the possibility of funding full-time child care in its polytechnics.

Ruth Goss, the ILEA council member responsible for the under-16s, explained that this is in response to representations from students and members of teaching staff. However, funding the

block grant funding for polytechnics is not allowed to be spent on the provision of creche or nursery facilities. The situation is complicated by the clash of responsibilities between the Department of Health and Social Security, the Department of Education and Science. The teacher in a nursery may place the child in a nursery but may not actually fund the nursery. It may

be a further difficulty arises from the fact that ILEA considers teachers' pay. ILEA considers it to be an equal opportunity to employ a woman, this tends to imply provision of some form of child care. The Burgham agreement, however, forbids remuneration in the form of benefits as opposed to wages. The time being the authority is only able to provide sub-

Backing for physics revamp

by Sandra Hempel

A University of London working party has backed an earlier plan to reorganize physics into five departments and reduce staff/student ratios.

But the announcement last week of the University Grants Committee's decision to give London another 305 science students for 1983/84 means that the working party's forecasts on student numbers may have to be revised. The extra student numbers are unlikely to affect the main thrust of the report.

The new departments will be at University College/Birkbeck; King's/Queen Elizabeth; Queen Mary College and Royal Holloway/Bedford. The physics department at Imperial remains unchanged while those at Chelsea and Westfield are to move.

The working party, chaired by Sir Sam Edwards, Professor of Physics at Calus College, Cambridge, and consisting of principals and heads of departments from the 10 colleges involved, was set up to advise on preserving academic excellence in the face of the series of institutional mergers currently being worked out.

It concludes that the physics plan, first put forward by an inter-collegiate committee, is "both possible and desirable and should not present the university with major difficulties".

The working party identified a staffing problem, however. While heads of schools were said to want to keep a good student/staff ratio for physics, their overall budgets suggested that a 10:1 ratio was inevitable for most. The difficulty of very expensive and labour intensive projects that put a strain on staffing needed resolving "at a higher level".

The average ratio of 8.5:1 was a considerable deterioration from the 1979/80 figures of 7.4:1.

"Although these ratios are necessary for short term financial expediency, they are not in the long term interest of the subject", the report says.

The future of the departments at Chelsea and Westfield colleges was still uncertain. Chelsea had made no decision except that physics should be reduced to the degree in applied physics while Westfield accepted the case for moving its physics department. In view of the proposed King's/QEC/Chelsea merger, Chelsea's electronics and electronics groups could join King's electric engineering, but there was room for considerable flexibility. Westfield's work might be divided between RHC/Bedford and QMC.

Chelsea College Students' Union has called the report "inadequate" and said it feels betrayed and cheated. The union is particularly angry at a reference in the report to the phasing out of physics at the college. The working party says it discussed the question of sourcing out student opinion on the issue but concluded it was not necessary.

Glasgow claim cut by £500,000

by Olga Wojtas

Scottish Correspondent

Glasgow University is to receive almost £500,000 less than its claim to the University Grants Committee for re-engaging staff who have taken early retirement.

A delegation of the principal, two vice principals and the finance officer met the UGC last week to appeal against the decision, but the matter is not expected to be dealt with before May.

A report in the university's Newsletter says the full cost of premature retirements with re-engagement between 1982 and 1985 will be almost £900,000. The university claimed £657,000 from the UGC, but on the understanding that only 75 per cent of such claims would be met - expected about £490,000.

The university has now been informed that it can only expect £55,000 per year as only re-engagements which will terminate in 1985 will be funded by the UGC, says the report.

"An appeal against this decision has been made on the grounds that the university has followed UGC guidelines without deviation and is now being penalised for obeying."

Dr Ron Emanuel of the university's Association of University Teachers said most of Glasgow's re-engagement contracts ran from 1984 to 1987 and would not be eligible for UGC money.



Oxford Polytechnic's buildings research team make a site visit as part of a project on the design and location of small factory units. The team, (left to right) Mrs Val Bacon, Dr Roland Newman and Mr Michael Jenks, have now won a £31,000 grant from the Leverhulme Trust to study the effects of conservation policies on the conversion and re-use of redundant buildings by small firms.

Careers advisors have little time left for guidance

by Felicity Jones

The work of London's careers service has been distorted by the high level of young unemployed so as to almost exclude educational and vocational guidance.

This was the conclusion of the Inner London Education Authority education officer's report to the authority's further and higher education sub-committee. The work of careers advisors at colleges of further education had increased significantly with a growing demand from students for vocational guidance and group work.

Students over 18 have had particular difficulty finding work. At Paddington College a 100 per cent increase in requests for information was reported.

In the polytechnics, heavy and increasing unemployment was the major factor determining the shape and content of work, said the report. All students had extreme difficulty finding suitable work.

More than 1800 graduates and diploma holders from the five polytechnics were registered as seeking permanent employment. In previous years only certain disciplines were affected, but last year, practically all courses carried casualties although it was still most marked in arts and humanities.

On the other hand, demand from companies for new graduates showed

a substantial decrease. The annual "milk round" of companies was reduced from 85 to 65 companies and the case of a first class honours graduate who made 44 applications for one job offer was typical.

Students continued to make heavy use of career centres. The appointment of an unemployment specialist has been reported successful in finding non-traditional job opportunities and running one or two day workshops.

The dilemma has been whether to channel resources to present students to try to prevent unemployment or towards out-of-work past students. Each course is being followed but this is stretching the resources of the careers service.

In London as a whole there are 17 young people chasing one job compared to four in 1980. The report said that despite the declining credibility of the Youth Opportunities Programme, nearly 27 per cent of those who left the programme in the last four months found a proper job and a further 13 per cent were motivated to continue in education or training.

But there was also a strong indication of growing disillusion, as out of the 40 per cent who went back on to the unemployed list a fifth did not bother to respond to repeated inquiries from careers officers.

Bridging the coffee gap

The often-neglected partners of mature and postgraduate students have been offered a social lifeline at Sheffield University.

Student counsellor Mrs Mary Sharrock is organizing coffee and sympathy sessions for couples with one partner outside the university sector in an effort to bridge what can develop into a damaging gulf.

While Mrs Sharrock says that there is no evidence that academic work suffers, there is a tendency either for students to miss out on the social and cultural advantages of university life or for their partner to be excluded.

And she believes the events organized by the students' union do not attract older couples, largely because of the age gap.

"Adjusting to university life is quite a difficult thing, especially for a man in the process of changing his career or a woman after having had her children. If for example a wife is unhappy and feels excluded, this will rebound on the children."

"This is not a student problem, but a family problem. If one of the partners is involved in an activity which is exclusive of the family, this will be destructive of closeness."

Mrs Sharrock's solution, thought to be unique in British universities, is to provide the opportunity for couples to meet others in the same circumstances and build a social life which crosses the divide between university and the outside world.

Union leaders aim to monitor YTS closely

by David Jobbins

Trade union leaders are anxious to preserve the new Youth Training Scheme from the abuses which led to widespread criticism of the Youth Opportunities Programme.

Faced with claims from the extreme left within the trade union movement that the YTS is a vehicle for cheap labour, they believe that the only practical antidote is close monitoring of the scheme.

Mr Ken Graham, assistant general secretary of the TUC, told last week's TUC youth conference: "YTS will come into operation and we have got to get involved. The scheme is completely consistent with TUC policy on training for all, but we have to ensure that something which is consistent when it is written down is consistent in practice. How do we do this? By saying we will not get involved?"

TUC involvement ensured that schemes were good and helpful to young people, he said.

Mr Graham and other TUC leaders faced severe criticism over their acceptance of the scheme mainly from delegates who are members of the Militant Tendency-dominated Labour Party Young Socialists. Behind their rhetoric were fears based on experience of YOP that employers would substitute trainees for redundant employees.

Mr Graham pointed to the clause included in the scheme designed to ensure that recruits are in addition to a firm's normal trainee recruitment.

Another safeguard which YTS leaders are pinning their hopes is to ensure as many schemes as possible are in workplaces with strong union

organization.

"The more that schemes are established within the unionized sector, the greater our ability to ensure these young people are not treated as cheap labour. And if we can recruit them into the trade union movement the greater our ability to keep contact with them after their time on YTS, whether employed or unemployed," Mr Graham said.

The TUC is supporting the Jobs for Youth Campaign which is seeking an increase from £25 to £30 in the weekly allowance to trainees. On top unions will be able to negotiate with employers for a further £4.49 topping up without jeopardizing exemption from tax and National Insurance contributions.

Leaders of the college lecturers' union this week expressed "grave concern" at reports that the Manpower Services Commission was on the point of announcing a restriction of 15 weeks on the educational component of YTS.

The February council of the National Association of Teachers in Further and Higher Education warned that the move, apparently being considered because the MSC has insufficient funds for the longer courses which many college authorities had anticipated, was putting financial and numerical considerations before the needs of students.

Naffie is to monitor agreements locally to ensure they include a sound educational and training component.

"We are also concerned schemes are reputable and that work experience is in a properly organized workplace," a spokeswoman said.

IRAS turns day into night

Astronomers will soon have a complete, new star catalogue for research and reference. The InfraRed Astronomical Satellite, launched from California last month, is working perfectly and has begun to survey the sky at wavelengths unseen by earthbound observers.

Scientists who presented the results of the satellite's first scans this week were delighted with IRAS performance so far. Speaking at the ground control centre - the Science and Engineering Research Council's Rutherford-Appleton Laboratory in Oxfordshire - Dr Fred Gillett, of the Kitt Peak National Observatory in the US, said: "observing in the infrared region from Earth was like trying to do optical astronomy in daylight. IRAS made the difference between night and day."

The satellite, built and launched at a cost of around £100m, is the culmination of seven years work by 100 scientists in Britain, Holland and the United States, the three countries which support the project. Its main load is an infra-red telescope with detectors covering the spectrum from just outside the visible to the radio-wave regions.

Over 4,000 infra-red sources were seen the first day the telescope cover was removed, almost as many as the total previously known. The life of the mission is limited by loss of the liquid helium which cools the telescope and this is boiling off slower than expected. The project team now expect scans to go on for 300 days.

He said he was proud of the British involvement in the satellite, and progress to date helped justify the Government's decision to increase the SERC's budget last year. The survey was "a first-class example of what can be achieved by international co-operation", he said.

Honda backs Imperial's aerodynamics

Honda, the Japanese car manufacturer, is to back a research programme on vehicle aerodynamics in the Department of Aeronautics at Imperial College, London.

A tunnel is to be constructed with Honda's help which will capitalize upon experience gained in testing vehicle configurations in the department's Donald Campbell Laboratory, where the late Donald Campbell used to test his record-breaking boats and cars.

The laboratory is now used by many British and foreign car firms, among them BL (who produce cars in cooperation with Honda), Lotus, Williams and Ferrari.

Department head Dr Glynn Davies said: "We are glad that Honda recognises the importance of aerodynamics in the future econ-

instead of the 250 days originally planned.

This will be ample time to transmit data for a complete catalogue of infra-red sources, which the team hope will be ready in around 18 months time. The catalogue is expected to provide information to test theories of star formation and star death."

The satellite has already sent back images from the Tarantula nebula in the Large Magellanic Cloud - our nearest galactic neighbour - which appear to show stars forming behind dust and gas clouds which radiate infra-red rays.

The success of IRAS will be a good advertisement for the proposed British X-ray satellite which astronomers want the SERC to fund money for later in the 1980s. The crucial decisions on the new home-built satellite, expected to cost £50m, will be made later this year when the SERC asks for extra money from the Department of Education and Science in its future budget estimates. Mr William Shelton, undersecretary for education, appeared very impressed with the IRAS team's achievement when he operated the command controls at Rutherford on Monday.

He said he was proud of the British involvement in the satellite, and progress to date helped justify the Government's decision to increase the SERC's budget last year. The survey was "a first-class example of what can be achieved by international co-operation", he said.

The backing, he said, was a "vote of confidence" in the department.

Aston University, too, has secured a new Japanese link, giving management studies undergraduates first-hand experience of working in industry through an arrangement with Yokohama's Kanagawa University.

The scheme, which has been set up by Dr Robert Akroyd, will involve the undergraduates in an intensive three-month Japanese language course, followed by a full year with a Japanese company.

The first students for the scheme will be selected this spring and go to Japan in the summer.

Dr Akroyd of Aston's management centre, has just returned from a year in Japan as a Japan Foundation Fellow.

FREE

Take out a year's subscription to The Times Higher Education Supplement and we will also send a free copy (worth £7.95) of the very latest hardback edition of Roget's Thesaurus specially bound for the Times Supplements. This 1,300 page edition contains thousands of clear and concise definitions of words and phrases in current usage. Simply complete the coupon below and send it together with your cheque or postal order for £22.50 to the address shown. This offer applies to new subscribers in the UK only.

The Times Higher Education Supplement

Please send a free THE Roget's Thesaurus and a year's subscription to The Times Higher Education Supplement.

Enclose my cheque for £22.50. (Cheques made payable to Times Newspapers Ltd. Please send to)

NAME

ADDRESS

SIGNATURE

DATE

Please send this coupon with your cheque to FRANKS HOUSE, The Times Higher Education Supplement, 110, Strand, London WC2R 0BH.

Entry to Chinatown is barred

from a Special Correspondent

Angry neighbours of the Tufts University Medical Plaza in Boston have scored a partial victory in their campaign to stop the university building an eight-story health sciences library on a 12-acre site in the city's Chinatown district.

The Boston Redevelopment Authority is recommending that permission to build be denied. The zoning board of appeals, which short of litigation has the final say on the matter, earlier this month accepted the authority's opinion, but following a protest from university lawyers and a personal comment from Tufts president Jean Mayer, the administrative committee has suspended a decision for 90 days.

In 18 years of university expansion, the redevelopment authority's recommendation is the first time the city has rejected a Tufts agenda item. The university campus is located in a suburb of Boston while its dental and medical facilities are situated in the city's dwindling Chinatown section.

The proposed library, says one representative of the community's cultural concerns, "means inevitably more competition for less space in Chinatown".

Chinatown residents see the 90-day delay as both a partial victory for them and a second chance for Tufts. A vice president for Tufts dismissed the redevelopment authority's criticisms of the library blueprints as "off-the-wall". The director of the city agency called the plans "an alien design, incompatible with the character of the street".

Although a relatively small segment of Boston's growing minority communities, Chinatown has been experiencing a resurgence in its cultural presence and impact, say residents. A huge, ornate gate, adorned with dragons and other Asian symbols, welcomes visitors as a gift from the Republic of Taiwan. The new and largely expanded Asian wing at the Boston Museum of Fine Arts has also helped to generate new interests in the city's Chinese community.

Some speculate that public opinion may side with Chinatown because the controversy is being discussed under the light of the New Moon celebration, the Chinese new year.

Peter David, North American Editor, The Times Higher Education Supplement, 1333 R Street N.W., Suite 440, Washington DC 20005. Telephone (202) 638 6765



The transition from high school (above) to university (below) can be hard. Now steps are being taken to soften the blow.



Bridging the high school gap

from Peter David

WASHINGTON American universities, after neglecting the needs of the high schools during the 1960s, have begun to enter a growing number of collaborative arrangements with schools, according to a new report published by the Carnegie Foundation for the Advancement of Teaching.

The report, released last week to coincide with a major conference at Yale University attended by both university presidents and school superintendents, documents a large number of schemes in which secondary schools and higher education have cooperated to raise standards and ease the transition between school and college.

Mr Gene Maceroff, the report's author, says one reason for the change of mood may have been the "shock treatment of remediation" - as more and more colleges have found it necessary to make up for deficits in high-school courses. Whatever the reason, the relationship between the two levels of education had begun to change.

The report continues: "Representatives of higher education and the public schools are taking notice of each other, with and without the prodding of legislators. Discussion of mutual problems has begun and there is tacit acknowledgement that it is time to overcome the distrust that has proved so obdurate a barrier to cooperation."

A number of collaborative schemes are singled out for special comment in the report. One, Syracuse University's "project advance", permits high-school pupils to earn college credits without leaving their school classrooms.

Seventy-five schools in four states participate in the programme, which uses the same material and the same tests as first-year students at the university. The school itself decides which students can enter the

programme, with Syracuse requiring only that participants complete the normal school curriculum in addition to taking the project advance courses.

Operating on a more limited scale, Kenyon College in Ohio has a school-college articulation programme through which six private schools are able to offer courses that lead to college credits. Keeyoo, like Syracuse, awards its credits to students who successfully complete the courses in high school, and a Kenyon transcript is sent to whichever college the student eventually attends.

The report praises the "extraordinary" efforts of Johns Hopkins University in teaching out to gifted pupils still in school. A programme for mathematically precocious youth has been followed by a programme for verbally gifted youth.

In both cases, gifted children in the seventh grade are identified through the scholastic aptitude test and given every opportunity to accelerate their school studies, to some cases entering university at 15 or 16.

Pupils on the scheme who remain in high school, as most do, are able to participate in a Saturday programme at Johns Hopkins or at satellite centres established around the country. Some youngsters and their parents travel two or three hours each way for the Saturday courses.

The Hopkins model has been picked up by several institutions, including Duke University, Northwestern University and Arizona State University, so that 13-year-olds in other parts of the United States are able to move through the school curriculum at a pace better suited to their special abilities.

Another form of university/school collaboration highlighted in the Carnegie report is a new effort by many universities to improve the quality of applicants for teacher training. Last year a consortium of eight universi-

ties spearheaded by Pennsylvania State imposed new and stringent admissions tests on applicants intending to go on to teach.

In a different initiative, the University of North Carolina at Chapel Hill has launched a fresh attempt to lure better qualified candidates to elementary and secondary school teaching by reviving the master of arts in teaching, a scheme set up in the early 1960s but since fallen into disuse.

Almost all the students chosen to initiate the programme last year had majored as undergraduates in the biological or physical sciences, mathematics or English. They have undertaken to become secondary school teachers in those subjects and each has been given a \$6,000 stipend plus a tuition fee waiver.

Once they get their master's degrees, the new teachers must work for at least three years in the schools of North Carolina or Tennessee, preferably in the rural areas.

Commenting on the report, Mr Ernest Boyer, the foundation's president, pointed out that nearly one out of every two American high-school graduates went directly on to higher education and a closer relationship between the two sectors was urgently needed.

But he warned that few of the schemes had been properly evaluated and that the power of tradition re-mained a strong obstacle to closer relationships.

"Too often, the last year seems like it ought not to count. It is a time when students' high school feel they are no longer part of one world and have not yet passed into the next world," he said.

"Surely, schools and colleges could create a more satisfactory transition period that blends the two levels in a way that carries the student forward more smoothly and enhances, and does not detract from, the purposes of education."

OU moves its American headquarters

by our North American editor

The North American centre for Britain's Open University has moved from New York to the headquarters of the American National University Consortium in Maryland. The NUC promotes distance learning to help older students take first degrees.

The Open University foundation was established in New York in 1974 in the hope that it would be able to co-produce courses with American universities. Dr Michael Neil, executive director of the New York office, admitted last month that the results had been disappointing.

But he added: "Our experience has shown that the most likely mode of cooperation have been the adaptation of Open University courses and the exchange of information and personnel."

"The NUC has been the most successful in this regard and its member colleges are the biggest users of our materials. Housing our North American centre near the NUC seems to be a logical step."

Dr Neil will not, however, remain in the United States and is returning to the Open University foundation at Walton Hall. The Maryland centre will be staffed by an information officer and maintain Open University catalogues and resource materials.

The Open University's involvement in the United States began in 1972 under the auspices of the College Board and the Educational Testing Service in a programme financed by the Carnegie Corporation. Open University courses were tested at three colleges - the University of Maryland, Houston and Rutgers.

Bribes professor ousted from job

A professor at the University of Maryland has pleaded guilty to charges of organizing a bizarre system of bribery in which he lured three graduate assistants and pocketed half of their stipends. In return, two of the assistants were required to do no work and one received high grades for courses he never attended.

The professor, Mr Al-Tony Gilmore, former director of Afro-American studies at the university's College Park campus, was charged after state police staged an elaborate "sting" operation. One of the graduate assistants lured the professor to a meeting near a parking van to discuss the scheme, while a detective hid in the van under a blanket.

In court Mr Gilmore admitted that he received about \$12,000 from the three assistants over a period of more than three years. His own salary was \$41,000. Although the professor has lost his job as director of the department, he has not yet been fired by the university.

Peace project to embrace East, West and Third World

by Thomas Land

Several big universities are expected to collaborate in a global peace research programme to be launched this year by the United Nations.

It is to break new ground by concentrating on the causes of strife and violence in international relations instead of pursuing conventional studies in the framework of disarmament and arms control. The peace research programme is to be coordinated by the United Nations University (UNU) under the guidance of Dr Rajni Kothari, director of the Centre for Research on Developing Societies in Delhi. The universities collaborating in the project are likely to include some from both East and West as well as the South, where the arms race has recently intensified.

The programme - coinciding with the European strategic negotiations in Geneva - will analyse an industry which employs a fifth of the global workforce of qualified scientists and engineers in military activities, consuming a quarter of all investment

devoted to research and development.

The project follows the publication last year of a UN study prepared by a group of government specialists which analyses the relationship between disarmament and development. It called for more disarmament-related public information, education and research activities.

Dr Kothari, a sociologist, recently discussed disarmament and peace research during a workshop of academics, parliamentarians and others at Hiroshima University.

He considered that the concept of peace research based on the assumption that general disarmament would be achieved through a gradual, phased reduction of weapons should be reviewed. He thought that research workers must rid themselves of the "absurd cobwebs" preventing

them from thinking about ways of putting an immediate end to the arms race. It was a "myth" that countries can prepare for war in the interest of maintaining peace.

The UNU programme will address five principal issues of "peace and global transformation". These are: conflicts over natural resources (defined to include radio hands and satellite orbits); the global economic crisis; the role of the state and inter-governmental agencies; the problems of vulnerability, violence, human rights, basic needs and cultural identity; and the process of militarization.

Since each of these problem areas already receives specialist attention at various institutions, the UNU programme will seek to focus on the links between them and to identify the scope for action at various levels.

The entire programme is planned to be action-oriented, "in the hope," explains UNU, "that it would make a genuine contribution to the knowledge required by the campaign for peace".

That is in line with the official policy of most governments as expressed at the UN's special disarmament sessions - although governments tend to speak a different language when addressing their own peace demonstrators at home.

Thus the study of government specialists on military expenditure urges the UN to create a meaningful global "disarmament-developed perspective", exposing the disastrous effect of national policies. The study put the world's military expenditure in 1980 at nearly \$500 billion, including the \$26 billion international arms trade. This compares with \$300m invested by the World Health Organization - not quite the price of a modern strategic bomber - in a 10-year programme to eradicate smallpox worldwide.

Germans face student bulge

from James Hutchinson

BONN West Germany's university vice chancellors have called for the recruitment of more teachers to cope with a projected massive increase of students in the 1980s. They say that more money must also be spent on university building and research.

According to the Association of Vice Chancellors, the student population will rise by 30 per cent to 1.5 million by 1989, after which it will "taper off" to about 1.1 million by 1995, its present level.

The federal government, preaching the need for thrift, considers that the universities should cope with the student bulge within their "normal" budgets. The universities say that is not possible without an extension of the *numerus clausus*, the list of subjects for which there are enrolment limitations.

They point out that educational policy is still aimed at providing a university education for all suitable applicants. "We support this aim," say the vice chancellors, "because there is no adequate alternative to university education."

Turkish junta's not for bearding

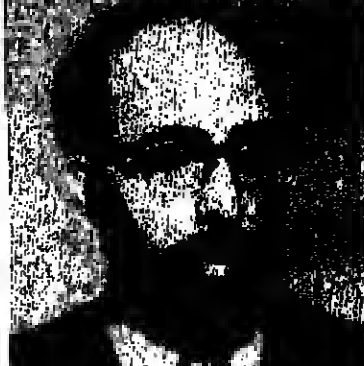
Professor Seiguk Erez, chairman of the Istanbul Turco-British Association, has been suspended from his post as Professor of Obstetrics and Gynaecology at Cerrahpasa School of Medicine at the University of Istanbul because he refused to shave his beard. Turkish academics were warned earlier in the teaching year that they could not keep both their beards and their university positions.

Some of them shaved, a few who had been clean-shaven before grew beards, but some, like Dr Erez, continued to meet their classes hirsut. Now, in what appears to be a test case, the Court of Decency has summoned him to appear, and will, no doubt, order him to shave.

This court has also ordered students to attend classes dressed in ties and jackets. In Ankara the student organizations are said to have accepted this - but to be on strike until the Government gives them grants which will buy the new clothing.

This emphasis on decency may seem familiar to those who know the Middle East and Islam, but is an unexpected development in Turkey, where the ruling military government seems to be as fearful of extreme religious fanaticism as it is of political views of centre. In fact it sees the beard as a left-wing symbol, believing that the universities are centres for opposition parties.

Many other university teachers lost their jobs last week on other grounds, among them Tarik Zafer Tuysa, who was Dean of Political Science at Istanbul until he was removed last year. He has now "asked for early retirement", though it is



Professor Erez and his subversive beard

suspected that he was asked to go. Yalcin Kueuk was sentenced to eight years in jail for his book, *For a New Republic*, which the court held was Marxist.

Two research directors from Ankara's Middle East Technical University in Britain for a tour financed by the British Council which has upset some Turkish academics. Professors Kenal Guruz and Yahya Tezel are to spend two weeks investigating the possibilities of cooperation between British and Turkish universities.

The institute staff, however, refused, saying that they could only do so on the orders of judicial and police authority.

With no practical means of redress at its disposal, the academic senate of the academy expressed its moral indignation by passing a formal resolution of protest against the police and authorities and formally congratulated the rector for his defence of the students.

Because of the firm stand taken by the Krakow academic community, few attempts have been made to recruit university lecturers into the new trade union structure. Instead, members of the former Polish Teachers' Union (which, like Solidarity, was dissolved in October 8, 1981) to the Krakow area are being automatically listed as members of the new unions.

Few takers for Polish student body

The new Polish Students' Association (ZSP), established last November, is experiencing a "difficult start", according to the journal *Rzeczpospolita*, which favours a rigidly orthodox political line. But the journal was not explicit in saying whether the lack of student enthusiasm for the new body was the result of apathy or pressure from their fellows.

Rzeczpospolita noted, in particular, that at the Krakow Academy of Mining and Metallurgy, a mere 200 students had joined (the academy has some 10,200 students). It has a long tradition of political activism, and last November, the academy became the focus of a major confrontation with the security authorities. According to the *Solidarity* underground press, from November 9-11 (the second anniversary of the legal registration of *Solidarity*), several dozen students of the academy were beaten up by the police during attempted demonstrations. The rector of the academy tried to intervene with the authorities to prevent such incidents in the future; the authorities, however, refused to discuss the matter unless the rector first handed over the names of the students coerced.

This he was unwilling to do, knowing that to do so would risk their suffering further reprisals. The rector then approached doctors from the Forensic Medical Institute in Krakow and asked them to examine the students.

The institute staff, however, refused, saying that they could only do so on the orders of judicial and police authority.

With no practical means of redress at its disposal, the academic senate of the academy expressed its moral indignation by passing a formal resolution of protest against the police and authorities and formally congratulated the rector for his defence of the students.

Because of the firm stand taken by the Krakow academic community, few attempts have been made to recruit university lecturers into the new trade union structure. Instead, members of the former Polish Teachers' Union (which, like Solidarity, was dissolved in October 8, 1981) to the Krakow area are being automatically listed as members of the new unions.

Fraser tough on tenure

from Geoff Maslen

MELBOURNE Significant changes to the staffing structure of Australian universities, including the number of tenured academics, are to be made by the government of Mr Malcolm Fraser if it is returned to office after the election on March 5. According to documents leaked to the press, the Fraser Cabinet decided last month to change long-standing tenure procedures in higher education institutions by reducing the number of tenured staff to 80 per cent of the total full-time staff at the level of lecturer and above in universities and lecturer level two and above in colleges of advanced education.

The federal government had decided that it would make funding of tertiary institutions conditional on satisfying these ratios of tenure to non-tenured staff. The new system would be phased in over several years. Details of the changes were to have been announced by the minister for education, Senator Peter Baume, when Parliament resumed at the end of February. But the decision by the Prime Minister to call a snap election will now delay the tenure decision and gives the various groups involved an unexpected chance to lobby both parties on the issue.

Last year, an all-party Senate standing committee on education and the arts carried out an inquiry into the academic tenure and recommended that the percentage of tenured academics should be limited to 80 per cent of the academic staff of

universities and colleges of advanced education. However, the Tertiary Education Commission, in a private memorandum to the minister, recommended an 80 per cent limit to the proportion of tenured staff in each institution. The Senate committee set the target for grades of lecturer and above 94 per cent of academics at universities and 4 per cent of academics at colleges were tenured.

As a result, the scope for reallocating existing resources was determined largely by the rate at which vacancies arose from deaths, retirements or transfer or employment to outside the higher education system. The committee said that there was concern at some levels that the present tenure system seriously affected the efficiency of the higher education sector. When the federal Cabinet discussed the issue it decided that a lower level than 90 per cent was more desirable from the point of view of both staff and financial flexibility.

Critics of the rise in the number of non-tenured and contract staff in higher education over the past five years claim the staffing problems in higher education flow from the government's financial restrictions and cut from the tenure system itself. They say that the tenure system is outdated, whether it would alter the proportions of tenured versus non-tenured staff if elected to government but the then opposition spokesman on education welcomed the Senate committee's report when it was tabled last year.

Mexican staff make do with 25% increase

from Emil Zubrya

MEXICO CITY Academic staff at the National Autonomous University of Mexico (UNAM) have accepted a 25 per cent salary increase and rejected calls for a walk-out in pursuit of their original claim of between 50 and 60 per cent. The award, which also includes a 4.9 per cent increase in fringe benefits, will cost the university an extra 4.5 billion pesos (\$20m) per year.

Rodolfo Ceceo Mota, a UNAM administrator, hoped that the government would not see the wage increase as a reason to reduce its funding of teaching and research at the university. Research projects are currently financed by around 17 per cent of the total budget.

Raul Belar Navarro, UNAM secretary general, revealed that the budget for this year will be between 35 and 40 billion pesos (\$154-176m). This represents a 60 per cent increase on last year. Some 14 billion pesos (\$62m) of the new budget will go on the wages of academic staff.

The acceptance of the 25 per cent offer by the Autonomous Association of UNAM Academic Personnel, which represents some 33,000 teachers, owed much to the personal intervention of Dean Sergio Reyes Lujan, who appealed to the teachers to take into account Mexico's acute economic crisis.

Vice chancellor sacked

from D. B. Udalgama

COLOMBO On the eve of the re-opening of the University of Sri Jayawardenapura this month, President J. R. Jayewardene, who is also minister of higher education, replaced the vice-chancellor, Professor T. B. Kanagaratne, by Mr K. Kodituwakku, a former university lecturer who was an adviser to the ministry of youth and employment.

No reason has been given for the removal of the vice-chancellor, but the university was closed prematurely at the end of last year, following a serious clash between undergraduates and local residents in which several were injured and much damage done to university property.

Three committees are at present investigating student grievances and demands at the universities of Sri Jayawardenapura, Colombo and Peradeniya. A three-man committee,

headed by a retired Supreme Court judge, is investigating the causes of a clash between pro-government students and students favouring the National Liberation Front (which organized the insurrection of 1971) after student council elections.

Undergraduates of Colombo University recently forced the vice-chancellor, Dr S. Wijesundera, to give a written assurance that an inquiry would be held into their grievances. On the previous day, they had been tear-gassed and baton-charged by the police when they marched to the vice-chancellor's office to protest against the admission of external students to the law faculty on payment of fees which, they said, negated the principle of free education. They also protested against the admission of students from the Kotelawala Defence Academy to certain courses outside the normal admission system. A committee has been appointed

Foreigners welcome in Japan

The desire of Japanese universities to appoint foreign, and especially English-speaking academics to their staffs is continuing apace.

A British specialist in Japanese culture, Dr Peter Kornicki, has accepted an invitation to become an assistant professor at Kyoto University, where he is currently completing research into social change in nineteenth-century Japan.

Japanese universities usually favour foreign academics because

they help attract promising foreign undergraduates who would otherwise be put off by the difficulty of learning Japanese.

The law faculty of Kyoto and the Taikoku University, for example, are the latest Japanese institutions considering the appointment of foreign academics. Kyoto has been stalking Dr Konicki from Oxford University for some time, regarding him as "an outstandingly able researcher." His duties will include supervising Japanese postgraduate students.

Harvard rapped over slack investigation of 'fraudulent' heart specialist

from E. Patrick McQuaid

CAMBRIDGE, Mass Harvard University has received a sharp slap on the wrist for its failure to investigate properly the activities of a heart specialist suspected of falsifying data in a series of costly government-subsidized experiments.

The National Institute of Health, the federal umbrella agency monitoring such research, has issued a decree barring Dr John R. Dorcee, the former Harvard Medical School cardiologist, from receiving any government research funds for 10 years and insisting that the university refund \$122,371 it received to study the effects of certain drugs following heart attacks in dogs.

The case was carried out by the Cordian Research Laboratory of Brigham and the Women's Hospital, the university's Boston affiliate, in 1981, but since the discovery of Dr Dorcee's falsifications an investigation has been underway at Brigham. Last year this committee

conducted experiments prior to his Harvard appointment in 1979.

A six-month inquiry by a panel representing the National Institute of Health has suggested that Harvard contributed to the proliferation of academic fraud, especially in its decision to allow Dr Dorcee's immediate supervisors to handle the initial investigation without notifying the government agency of its suspicions.

This marks the first occasion in the history of the National Institutes of Health that the ministry has enforced its authority to prohibit a scientist from receiving research subsidies or from participating in ministry-related programmes. Dr Dorcee, 54, is currently with Ellis Hospital of Schenectady, New York.

Following Harvard's internal probe, labelled as "insufficiently rigorous and not definitive" by ministry officials, Dr Daniel C. Towbin, dean of the medical college, appointed a special panel to investigate all of Dr Dorcee's work with Harvard. Last year this committee

determined that Dr Dorcee had falsified data in three studies, but the panel reporting to the National Institutes last week concluded that at Harvard "projects be worked on at Harvard were tainted."

Publicity over this and similar cases elsewhere has generated a series of university investigations on "academic fraud" from several American institutions, and professional agencies (THES, September 24).

Last summer, Dr Dorcee's supervisors - Dr Eugene Braunwald and Dr Robert Kloner - recalled selections from his published studies the cardiologist had been associated with some when it seems from four other research efforts, working on a joint Harvard-Boston project, that they were similar to his. In May 1981, researchers at Harvard questioned Dr Dorcee's findings on an electrocardiogram tape but the university did not share its concerns with the National Institutes until October

five months later, when the four contributing universities and the ministry's National Heart, Lung, and Blood Institute simultaneously discovered the discrepancies.

Dr Dorcee claimed it was an isolated instance and while acknowledging the presence of fraudulent research, excused himself of any personal blame. His colleagues kept the case an internal matter, for fear of jeopardizing his promising career.

"The supervisory practices in the laboratory reported to the National Institutes panel of inquiry," while in no way responsible for Dr Dorcee's misconduct, may have contributed to his being able to produce falsified data and to the subsequent difficulty in documenting the extent of the problem.

The report further charges that a "hurried pace and emphasis on productivity, coupled with limited interaction with senior scientists, have contributed to the disappointing events."

Heart specialist

The ministry panel included the deans of Mayo medical school, the University of Texas health science centre, and professors from Pennsylvania State University and the State University of New York at Buffalo.

In a written rebuttal, Dr Braunwald first took the ministry could not fairly criticize "our practices and supervision" without conducting an extensive probe at other medical laboratories "where he may have cheated".

Dr Braunwald and Dr Kloner bid themselves, he pointed out, determined that Dr Dorcee's work was "worthless" when they analysed tissue samples from dog hearts he had experimented with. Dr Braunwald admitted, however, that more scientists "are out trained, any more than the disgraced panel members are, to investigate scientific fraud."

The ministry has ordered that the Harvard laboratories undergo an on-site review to determine, a year from now, if supervisory practices have improved.

Alternative Parisian chic

After the success of a trial volume that appeared last autumn, a new review of cross-disciplinary commentary named *Babyloise* made its debut in Paris this month.

Published as part of the Union Générale Editions' 1012 series, the pilot issue addressed the question of post-modernism in fields ranging from politics and economics to architecture and philosophy. Its second issue, to be published in September, will focus on the theme of socialism as espoused and practised in Europe and the Soviet Union.

Divided into one section of primary scholarship and another of commentary, the review comprises 250 pages and will appear tri-annually with the continuing aid of grant from the Centre National des Lettres. The editors stipulate that all contributors must be accessible to non-specialists in the field concerned and take responsibility for any translation into French.

But *Babyloise* is more than the name of a review or a collection of topics. It is also the people who direct it and their response to a particular set of problematics. Economists, sociologists and professors in various fields, they seek above all to create what they call a "working place" for intellectual confrontation which is otherwise disappearing in France.

Disappearing, because in what has come to be known as "the crisis of leftist thought", a generation of dispossessed scholars and thinkers has found the arena of debate co-opted by the state. As review founder Yann Moulier explains the situation: "At a top level in France, there is no discussion of ideas. You find only the State, one agency or another, taking supremacy in a purely intra-bureaucratic debate."

In frustration, scholars and intellectuals have become increasingly specialized and uninterested or uninformed about developments beyond their respective fields. As a community of thought has evaporated, they have also abdicated responsibility for organizing the circulation of ideas.

In order to transform this so-called "crisis", *Babyloise* hopes to provide an alternative outlet for researchers who are increasingly opposed to institutions of knowledge and culture such as the press and the university system itself.

At the same time, *Babyloise* can be considered neither as a substitute for academic journals nor as a forum for a specific kind of writing. The first issue not only demonstrates an admirable depth and scope of subject, but the editors have shown themselves willing to break beyond the bounds of particular ideologies and opinions. While responding to a crisis of leftist thought, they still include, for example, a piece by the arch-conservative economist, Lucas and Sergeant, as well as promoting the research of fledgling scholars.

In doing so, the editors make good their promise as stated in the review's introduction "to confront a Babylonian diversity of thought". Clearly the undertaking is ambitious and, like many of the Paris movements that have flourished here in recent decades, idealistic. It might at first smack of a certain Parisian chic, except that *Babyloise* will have noth of it. Despite the Sixth Arrondissement address, its editors insist on the necessity of opening their pages to an international community. "At the beginning, we thought we might assemble the old standards, the Foucaults and Derridas, but we also wanted to do something less Parisian," said Moulier.

All part of the effort to reach beyond Paris as a mythical intellectual centre, the editors plan eventually to assemble a network of correspondents from other countries who will work with them and spread the good words. Judging from the commitment and expertise last issue, the first issue, the word should be.

Pamela Schirmeister

The Israeli intelligentsia - largely left-wing and opposed to the Begin government - has recently taken grim note of two portents: a call for legislation against contact with the Palestine Liberation Organization; and the Censorship Board's banning of a satirical play.

Foreign minister Yitzhak Shamir recently told the Knesset that there was "no avoiding" legislation to prohibit Israelis from contacting or meeting people belonging to or linked with the PLO. The cabinet has already instructed Attorney General Yitzhak Zamir to submit an opinion about amending the existing law covering contacts "with foreign agents".

These moves were sparked by a meeting last month in Tunis between PLO chairman Yasser Arafat and three leading Israeli left-wingers - Professor Mattityahu Peled, a former major-general who teaches Arabic literature at Tel-Aviv University, Uri Avnery, editor of the popular weekly, *Holam Haze* and a former Knesset member for the Sheli Party, and Ya'acov Arnon, a retired director-general of the Treasury.

Professor Zamir, the cabinet's legal adviser, last summer quashed a move to prosecute Avnery for meeting Arafat in Beirut during the siege. The attorney general's opinion then was that Avnery could not be prosecuted under existing laws.

The calls for changing the law to allow prosecution of those meeting PLO leaders are seen by many Israeli intellectuals as a serious threat to political liberty.

They link this to other recent moves and statements - such as de-nigrating those who oppose government policy as "traitors".

The second portent came last December (with the confrontation between the state and the management of Tel-Aviv's Neve Tzedek (oasis of justice) theatre company).

Neve Tzedek routinely applied to the censorship board - a non-governmental public committee which by law must approve all films and plays - for a permit to stage Hanoch Levin's new satire, *The Patriot*.

The board, chaired by ex-journalist Joshua Justman, objected to some passages, which attacked Israeli's invasion of Lebanon, religious attitudes to Arab and Jewish religious establishments. The board banned the play, arguing that it affronted fundamental values of Judaism.

Israel and the audience's susceptibility. No play before this had been banned in Israel's 34-year history. The theatre refused to obey the banning and the authorities declined to physically shut down the theatre. Neve Tzedek, to make its point, performed the play for one evening, in defiance of the censors.

Demoralization set in on the censorship board and several members resigned.

Eventually Mr Zamir, prodded by the Interior Ministry, ordered the police to press charges against Neve Tzedek's managers for staging the play in that one "illegal" performance. No date has yet been set for the trial.

The *Patriot* is now being performed with the two passages the censors found objectionable being read rather than acted.

According to the censors, one of the passages compares present Israeli treatment of Arabs with the Nazi treatment of Jews and the second passage depicts a Jew torturing an Arab. The theatre denies the censors' interpretation of the passages.

Hebrew University professor Ze'ev Sternhell said: "The struggle in Israel for freedom of expression must be and is constant, a daily affair. It is an expert on right-wing political movements in France earlier this century. With the Labour Party's electoral defeat and loss of power in 1977, he became one of the most politically committed and active academics in Israel.

He regards with a measure of satisfaction the current state of civil liberties in Israel. His point of view is complete "freedom of the press", as shown in the coverage of the campaign in Lebanon and of its political context. He concedes that "things in this respect aren't as bad as expected when Begin took office, and are still much better than they were during the 1950s" when Israel's founding father, David Ben-Gurion, effectively "smothered" expressions of opposition.

Professor Sternhell adds, however,



Massacre victims are removed from the Sabra camp. Actions like this have been roundly condemned by intellectuals

Retreat from the political arena

Recent events in Israel make it likely that academics will return to their university pursuits, says Benny Morris



that politically motivated censorship is clearly evident, and increasing, in the state-run electronic media, and it has become worse since Begin's re-election to a second term (in 1981).

But fundamentally, the facts of a strongly right-wing government, a state of war and military campaign in Lebanon, and bitter internal political and social conflicts had not resulted so far in serious inroads on political and intellectual freedoms.

Just days after the start of the Israeli onslaught in Lebanon Professor Peled, Hebrew University physicist Professor Daniel Amichai and other leading left-wing intellectuals formed the Committee Against the War.

Most intellectuals, steered clear of the committee which, because of the extreme views of its leadership, was regarded as "partisan" and "fringe". The committee managed to mass only some 10,000 supporters for its first - and only - rally against the Lebanese war in Tel Aviv's central square.

The Labour Party reluctantly gave its blessing to the war at first but the continuing carnage and destruction, the obvious expansion of the war's aims and the massacre of Palestinian in Israeli-held West Beirut eventually pushed the bulk of the intelligentsia into open, active opposition.

"There was no 'treason of the clerks' here," said Professor Sternhell. "There is no 'losing of the line', no falling into step behind the flag. We the intellectuals - led by non-conformism, the opposition. We did not betray our calling."

Professor Sternhell, a member of the Labour Party executive, recalled how he and a number of other intellectuals "pushed through" against the opposition of most of the party's establishment leaders "the decision to make common cause with the Peace Now movement in September 1982 and to jointly launch a mass rally to Tel Aviv."

Some 40,000 turned out for what was the largest demonstration in Israeli history. While focusing on the massacre, the rally effectively expressed the widespread discontent with the war and Begin's policies in general.

That rally, internal coalition pressures, and a variety of appeals by

groups of jurists and other academics, by the president of the Israel Academy of Sciences and Humanities, Professor Ephraim Urbach, and by Israel's president Yitzhak Navon, eventually prompted a reluctant Premier Begin to appoint a judicial commission of inquiry headed by Supreme Court president Yitzhak Kahan to probe Israel's involvement in the Beirut massacre.

"In the long term, my personal, possibly very subjective feeling is that the war will eventually lead, is already leading, to a retreat, a withdrawal, by the intelligentsia from politics. The academics will go back to their university pursuits, retiring from the political arena," said Professor Sternhell.

"The war has shown that Israeli society has insoluble problems. All the elites - the academics, the civil service, even the IDF officer corps - are anti-Begin."

Professor Sternhell himself is a major in the IDF reserves. During the war he served as an operations officer in a tank unit. "Thankfully in the fighting against the Syrians in the Bekaa valley, not in the heavily populated coastal areas." But the majority of the population, the masses, are with Begin, and their support seemed to be unshakable.

Along with many other intellectuals, I have come to feel that nothing that we can say or do will affect anything, change anything, change people's views," he said.

Professor Sternhell says that since the demonstration of the 400,000 he has phased out his political activities. "Look, if I must choose between satisfaction and success in my academic life and career and the frustration and despair of politics, the choice is obvious. I like writing books, not running around the public squares."

He has written a play book *Ni Drott, Ni Gueuch* (In France between the wars and has been invited to work at the Institut for Advanced Study in Princeton.

Other leading Labour Party intellectuals - such as novelist Amos Oz and A. B. Yehoshua - have also withdrawn from the political arena for much the same reasons.

A symptom of this despair,

according to Professor Sternhell, is "the complete silence" on Israeli university campuses since last summer.

The assistant dean of students at the Hebrew University, Aaron Chulow, believes that the quietening down of the campuses after three years of continuous student unrest is due to a number of factors, most of them non-political.

He points to the changed leadership this year of the fighting Kastel student faction, which has dominated the student union at HU for the past six years. The present leaders are a new breed, says Chulow.

Last summer, the HU authorities had formulated "a very negative forecast for the present year. We expected an increase of campus political violence and increased polarization between the factions."

But it turned out differently. The war failed to become a campus issue. Chulow suggests that the increased reserve duty for Jewish students because of the war - in some cases up to 90 days in uniform during the past eight months - served to cool political ardour.

A steep rise this year in tuition fees from around £150 to £350 may also have accounted for the greater devotion to studies.

According to the summer forecast by the university authorities, the HU's 600 Arab students (out of a total student body of some 15,000) were expected to rocket into political activism in reaction to the IDF's onslaught on the PLO.

"But the opposite occurred. The destruction of the PLO forces in South Lebanon, and their expulsion from Beirut, and the apparent lack of Arab indifference to the 'brother Arab' states to the Palestinians' plight, sent Israel's Arab students into shock. The war stunned and bewildered them."

And when the initial reaction wore off, says Chulow, the Arab students slowly began shifting their political sympathies from the radical Arab Ba'ath which is aligned with the PLO, and the rejectionist Front states to Kahan, the Israeli Communist Party, which is more moderate.

Chulow anticipates some turmoil on the campuses in the coming months because of the implementation of the Kitzav committee report on student fees.

Moshe Ketzav, a Likud Knesset member and deputy housing minister who headed the government committee, recommended that various categories of students receive substantial help from the state towards tuition.

Among the recommended categories for state subsidies - effectively a reduction of fees - are demobilized soldiers, residents of "development towns" and inhabitants of "underprivileged neighbourhoods" in cities. The subsidized categories cover only Jews.

The Arab students have charged that the report is "discriminatory". Large scale protests by Arab students and following Jewish students are anticipated by the universities.

On the other hand, the university confrontation at the HU slumbered down over the past few months, with the acceptance by an official student union of an arbitration formula and agreement by all sides to hold new student union elections in May. The university has once again "recognized" the official union; and the "alternative" (left-wing) union set up last summer has agreed to disband.

Despite the dominance of the large HU and Tel Aviv University campuses by right-wing student groups, Israel's universities continue to be regarded by the Likud-dominated government as bastions of opposition thinking.

But the Begin government has carefully avoided officially attacking the universities' university heads of university budgets in a manner which could reasonably be seen as politically motivated.

Budget cuts, while severe in certain spheres, have been no more radical than in government departments.

Professor Sternhell charges that the school curriculum set by the state, has become increasingly provincial and narrow, concentrating on Jewish and Zionist content. He says the curriculum fails to open the youngsters' minds to the "wide world beyond Israel and its problems."

Science's quality control

Two researchers argue that the peer review system cannot cope with present funding restraints. Jon Turney reports

Factory workers produce goods, farmers produce food and scientists produce... well, research. Measuring the quality of, or, tricker still, the quality of this last output is a contentious business - traditionally passed to groups of fellow scientists whose collective opinion feeds into evaluations based on peer review.

But funding bodies like Britain's research councils adopted peer review as a decision aid when science was cheap, research teams were small and budgets were rising. Can the same system cope with the demands of restructuring patterns of funding to meet new scientific and industrial needs when money is tight and "big science" dominates basic research spending? Two researchers at the Science Policy Research Unit at Sussex University, John Irvine and Ben Martin, argue strongly that it cannot. And the first fruits of their efforts to devise other ways of assessing research performance are now being published.

Big science is a term coined by science watchers to describe the growth of very large research institutes after the war. It takes in astronomy and space projects but the most famous examples - the cathedrals of high technology - are the accelerators built to study sub-atomic particles. The study of the unimaginably small is big science in every way: it uses huge machines, consumes vast amounts of energy and costs millions.

Big is also the word for the research groups involved. The European Organization for Nuclear Research (CERN) in Geneva, for example, employs 3,500 staff and has another 2,000 fellows and scientific associates. Its most significant recent experiment, designed to detect the elusive "W" particle, involved 177 physicists from all over Europe. This creates problems on top of those faced in ensuring a battalion of scientists all march in step. In a discipline dominated by three or four very large research instruments, where can you turn for the objective scientific opinion on which peer review depends?

As Martin and Irvine point out, anyone who knows the field well enough to have an informed opinion will generally have a direct interest in individual decisions about new money. This can lead to dispersing a rival centre to enhance one's own chances of increased funding. Or a few centres may agree among themselves to support each other's bids to give the appearance of consensus about goals and priorities. Either way, neutral, disinterested peer review is lost.

This is only one of the reasons the Sussex team cite to support their contention that peer review is in danger of breaking down. They also suggest that priorities established just after the war have become entrenched in the science policy system.

Many scientists who had helped the war effort by devoting themselves to nuclear weapons and radar took their rewards in the form of generous backing for related areas of high energy physics. As these areas became more and more expensive, it seemed that researchers in such fields were first, second and third in the queue for money.

Today, the Science and Engineering Research Council's £250m annual budget is divided between four boards. Nuclear physics and astronomy and space research both have their own boards while one of the two remaining boards covers all of the rest of SERC's scientific interests.

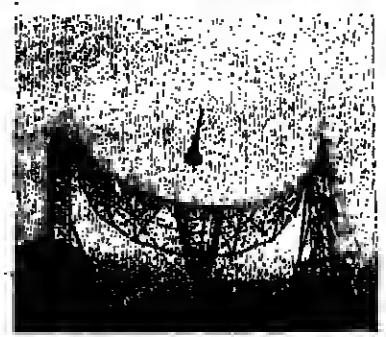
Martin and Irvine estimate that in 1979-80 more than £100m of the £141m the SERC spent on science (ignoring expenditure on engineering) went on large, centralized facilities in Britain and Europe. The fact that this was the position at the end of a decade when the council was

explicitly trying to divert resources from big science to meet other priorities shows the enduring influence of the old patterns of spending. They also argue, more generally, that peer review is a poor mechanism for re-ordering priorities. It works when the only decisions to be made are on allocation of extra money to new projects, but not when it is necessary to decide who to cut. And even though the British science budget has risen well compared with government allocations elsewhere, there is increasing pressure to find money for strategic new areas from existing funds.

Last year's public dissent from the recommendation of the Advisory Board for the Research Councils by the chairman of the Agricultural Research Council was an early sign of the stresses the new distribution will produce in the existing system. If the ARC is cut when the SERC's nuclear physics board spends more than the smaller council's total share of the science vote, the output of the big science facilities is bound to come under closer scrutiny.

Leaving aside arguments over whether high energy physics or astronomy should be supported on this scale on what the physicist Alvin Weinberg christened "external" criteria, Irvine and Martin call for the development of new methods for deciding whether the money that is allocated is well spent - methods for judging the "internal" merit of a series of laboratories or research groups in the same field.

Early efforts toward a "science of science" or "scientometrics" were usually based on counting published papers, and analysing citations of



Jodrell Bank: is its reputation justified?

those papers by other scientists. Researchers constructed impressive-looking tables of publications and citations by poring over the various science citation indexes published by Dr Eugene Garfield's Institute for Scientific Information.

But the results are pretty crude indicators of the quality of research output. Apart from imperfections in the original citation indexes, which are designed for easy literature searches rather than as raw material for social scientists, such work often fails to take account of reasons for citation.

The classic example of the weakness of this method is the importance of a simple approach according to Lowry's technique for protein determination. This modest but useful laboratory test is so widespread that it generates thousands of citations a year of the paper describing its first use. But it is hardly a revolutionary scientific breakthrough.

However, the Sussex authors argue that this type of analysis can offer a guide to the impact a paper makes, if not its intellectual quality, and that when the results agree with those from other partial indicators, it is reason to believe them. Their method is to apply their indicators - number and cost of published papers, citation frequency, and subjective productivity estimates from detailed interviews with a proportion of scientists in the field - to a few very similar institutions. In this way, the radio-telescopes at Jodrell Bank, Cambridge and Bonn or particle accelerators at Daresbury, Stanford and Hamburg can be compared, like with like.

Reactions to the early studies using this method have been mixed, say the authors. Irvine and Martin's paper or radioastronomy was in press two years ago but will not be published until next month. Changes had to be made to the text to meet

objections from some of the establishments whose records were scrutinized in the paper. The detailed results are not yet quotable, but it is known that Britain's Jodrell Bank telescope is shown to have a scientific record less distinguished than its high public reputation might suggest.

The delays this paper suffered led the *New Scientist* to allege, rather wildly, that the British science establishment is trying to suppress the SPUR reports. The actual response seems to be to play down their significance. When Irvine and Martin's paper on the issue Newton Telescope appeared last week, the leading scientific journal *Nature* suggested that it only confirmed what everyone already knew. The paper demonstrated that the Royal Greenwich Observatory's 2.5 metre optical telescope was singularly unproductive at its old site near Eastbourne. Certainly, the decision to move the telescope to the Canary Islands was taken several years ago, so its poor performance was already established before Irvine and Martin started counting papers. But they point to this as evidence that their method works.

However, *Nature* concludes that when making new decisions rather than assessing old ones the key questions are still "more easily answered by hunch than by calculation". And in a BBC *Horizon* programme broadcast next Monday which ranges widely, and critically, over science policy, SERC chairman Professor John Kingman says that while the Sussex work is interesting, there is still no substitute for peer review.

Dr David Morley, who is pulling together ideas for "science audits" of the country's research effort at the British Association for the Advancement of Science, echoes this sentiment: "Assessment of research is always going to be subjective, and based on subjective assessments of the quality of the people involved".

These comments may just reflect a wariness about the application of semi-quantitative methods to an activity as complex and elusive as basic research. No one wants to see a slavish adoption of measures like which occupied the health service which tell the reader much about administrative efficiency and nothing about the quality of care. But the insistence of scientific spokesmen on the supremacy of subjectivity seems at odds with their goals as researchers.

Is the division between the reputedly rational, objective and rigorous discipline of science and the hunches and informed guesswork of science policy to remain absolute? Perhaps few would accept Irvine and Martin's strongest claim - that there are now techniques "for evaluating past research performance to a rigorous and systematic manner", but there seems room for developing their work further.

Other research administrators certainly think so. Since their first studies of astronomy and physics were completed, the two have carried out projects for the Norwegian government on research productivity in state-funded laboratories and for the European Coal and Steel Research Programme. And they have just finished a major assessment of "the scientific holy of holies - CERN".

They would like, to try, and refine, their methods to help predict future research performance from a unit's past record, but it seems unlikely that money will be found for this work in this country. However, some senior SERC figures are more sympathetic to approaches like this in private than in public, and there are some supporters of science policy research in the Department of Education and Science.

Sir David Phillips, the new chairman of the Advisory Board for the Research Councils, has also said he would like to improve the information the ABC can draw on for its annual forward look. The job the proponents of these assessments have, whether they are supporters or critics of big science, is to put the case that it is in the interests of the physicists and astronomers that if their work is funded it is seen to be done well. Otherwise, it is likely to become vulnerable to unsympathetic questioning.

John O'Leary with details of the new course planning strategy

NAB's course action

The revelation last May that some 400 advanced courses in colleges and polytechnics, 15 per cent of the total, appeared to be running with fewer students than officially permitted under the course approvals procedure, was the talk of higher education at the time. It was to provide the National Advisory Body with its first major test of effectiveness and resolve and was widely expected to result in wholesale course closures and more than a few problems for certain institutions.

Starting as it meant to go on, NAB decided at once that the institutions would have to be given the opportunity to explain themselves, ruling out any hasty action. Some 50 courses included in the survey were already in the process of being closed by the department and NAB chose only a handful more for immediate examination. As a result, a mere four courses were refused approval for this academic year, two having been found to have closed already.

The remainder were split into two groups: those which had fallen below minimum recruitment levels in the year of the survey (1981) and those which had been below the target for two successive years. Faced with a formidable administrative task, NAB opted to defer consideration of the first group, which numbered 210 and had an average of 28 students in all years, until the main planning exercise for 1984-5.

Of the remaining 130 courses, it was decided to concentrate on 69 by

the time the accuracy of the survey had been checked and a number of courses which were no longer running had been discounted. This week the NAB board presented its recommendations on the fate of the remaining 69 to the body's committee and finally dispelled any fears that it would need a large package of closures to show toughness and readiness to act.

The board, with the support of the several DES representatives, has found only 15 courses deserving of closure this year. And eight of these have either been withdrawn by the institution itself already or are in their final year, so perhaps in anticipation of an unfavourable response from NAB.

One whole batch of 10 postgraduate arts courses were not considered individually, with a recommendation that an apparent mismatch between the number of courses approved by the DES (with the consequent assumption of student numbers) and the number of awards made by the department should be investigated before closures are ordered.

The board, on the advice of working groups where appropriate end the secretariat in other cases, gave its blessing to those courses which could be shown to have improved their recruitment records and/or which had the support of their regional advisory councils to continue. Some were successful on regional grounds, despite low numbers, while others were able to plead inter-dependence with successful part-time or other full-time courses.

Others had more individualistic explanations for poor recruitment, notably Leeds Polytechnic's "Yorkshire Ripper" effect, which was said to have discouraged enrolments in information science in 1980 and 1981. A more mundane and apparently unaccountable explanation was the decline in overseas student numbers.

Courses approved by the NAB

Institution	Course	Minimum enrolment	Actual enrolment 1980	1981	1982
Brighton Polytechnic	BA (Hons) History of Design	24	17	21	26
Bristol Polytechnic	BA (Hons) Textiles Fashion	24	22	18	25
Bristol School of Art and Design	BA (Hons) Textiles Fashion	18	14	14	18
Kingston Polytechnic	BA (Hons) Textiles Fashion	24	22	21	24
Preston Polytechnic	BA Fashion Design	24	24	24	25
Manchester Polytechnic	BA Public Administration	24	20	21	26
	Diploma in Clothing Design	18	18	15	15
	Diploma in Personnel Management	24	22	20	25
Middlesex Polytechnic	BA Contemporary Culture Studies	24	13	22	32
City of London Polytechnic	Diploma in Psychology	10	8	2	1
Huddersfield Polytechnic	ACCA Professional Course in Accounting	24	12	15	—
Hatfield Polytechnic	HND Production Engineering	24	10	9	12
Leeds Polytechnic	BSc Information Science	30/12	7	10	11
	BSc Engineering	24	22	21	22
	BSc Production Engineering	24	22	21	22
	Diploma in Administration Studies	24	22	14	19
Midland College of Higher Education	ACA Level 11	24	14	15	18
	ACA Level 2 and 3†	30	18	17	17
	TEC HO Building	24	8	10	17
North East Surrey College	Institute of Biology	20	10	10	17
North London Polytechnic	Diploma in Management Studies	24	12	21	21
Othman College of Technology	HO Media Arts Engineering†	24	11	11	24
Southall College of Technology	CEB Part 2	24	23	20	25
Warley College of Technology	HND Mechanical Production Engineering	18	21	11	14
North Staffordshire Polytechnic	Postgraduate Diploma in International Marketing	18	10	10	8
Portsmouth Polytechnic	IPM Part 1†	20	10	5	10
Birmingham Polytechnic	CEB Part 2 (Electrical Engineering, Mechanical Production Engineering)	24	9	15	23
	TEC HD Civil Engineering Studies	24	19	14	22
Polytechnic of the South Bank	BSc Mechanical Engineering	24	21	20	20
Willesden College of Technology	CEB Part 2	20	14	20	15
Wolverhampton Polytechnic	CEB HD/HD Civil Engineering	24	15	17	24
North East London Polytechnic	CEB Part 2	24	11	14	1
	BSc Manufacturing Studies	20	18	20	29
Baton Institute of Higher Education	BSc Electrical Engineering	30	20	20	21
Cambridge College of Art and Design	CEB Part 2	15	10	20	12

* Course withdrawn by institution or not planned for 1983/84.

† Approval granted for 1983/84 only.

Courses whose approval has been withheld by the NAB

Institution	Course	Minimum enrolment	Actual enrolment		
			1980	1981	1982
Bradford College	Foreign Correspondence/Translators	24	18	18	—
Polystechnic of Central London	Cambridge Diploma in English	24	18	18	5
Hammersmith and West London College	IPU Stages I and II	24	26	18	18
Highbury Technical College	Management Services Diploma*	16	14	14	—
Huddersfield Polytechnic	Polytechnic Diploma in Marketing	24	21	16	17
Nottingham College	BA Management Studies Equivalents	24	14	17	14
South West London College	Diploma in Administrative Management	24	18	18	18
Sunderland Polytechnic	Foundation Course in Accountancy*	24	18	17	—
Waltham Forest College	ACA Level 1	24	22	17	—
Willenden College of Technology	Diploma in Transport Management - Electrical Engineering Certificate	24	18	17	9
Liverpool Polytechnic	Institute of Building Association Part II*	24	11	11	—
Luton College of Higher Education	HND Mechanical Engineering*	24	17	11	—
Preston Polytechnic	CBE Part II Electrical Engineering*	24	6	11	—
Richmond College	HND Measurement Control*	26	5	11	—

H. T. Dickinson celebrates the 350th birthday this week of Samuel Pepys,

Few people will remember that the 350th anniversary of the birth of Samuel Pepys fell on Wednesday but a vast number will associate his name with the greatest diary ever written in the English language. During his life Pepys rose from relatively humble origins to become the greatest civil servant of his age, the creator of an important library, a celebrated virtuoso, and a close friend of many of the leading intellectuals of his day.

For more than a century after his death, however, he was known only to a few scholars. In 1825, with the publication of about one quarter of his private diary, Pepys suddenly became famous. Fuller editions followed, but not until 1976 was the complete text finally published under the editorship of Robert Latham and William Matthews. This has given the world a knowledge of Pepys's daily life and personal character more intimate and detailed than that of any man who has ever lived. The Diary's rich detail - over 1,250,000 words covering less than 10 years of Pepys's life - has been pillaged by many scholars seeking specific information on particular topics, but relatively few have concentrated on the central concern of the Diary - the complex and fascinating character of Pepys himself.

Samuel Pepys served the crown for nearly 30 years, rising from a humble position on the Navy Board to being the King's right-hand man in virtually complete control of the Admiralty. Although the least military of men, Pepys's administrative talents made him the architect of a great fighting service. Almost every aspect of naval administration was improved under his stewardship. He drove through both the largest building programme and the most complete re-fit that the Navy had ever undertaken. No aspect of naval administration evaded his interest or control: he tightened up the methods of victualling and supplying the fleet; he tried to control corruption among ships' pursers; he improved the navigational skills of ships' masters and all officers; and he supported the efforts of others to improve the care of the sick and wounded. Pepys even worked hard, though not always with success, to secure the proper food and pay due to ordinary seamen and to control the worst abuses of the press gang.

Pepys has long been recognized as a great administrator, but it is his role in the rise of the professions in late Stuart England that has recently attracted most interest. Geoffrey Holmes, in *Augustan England: Professions, State and Society 1680-1730* (London, 1982), has recognized Pepys's important contribution to the professionalization of the Navy and the Civil Service. When Pepys first came to office the career of the Navy officer was socially as well as professionally undesirable. The work was hazardous, the pay was low, employment and promotion prospects were uncertain, and dignity and status were generally lacking. Pepys wanted to create a profession that could offer to those who chose it permanence, profit and honour in equal measure.

The three reforms which he regarded as essential were the testing of an officer's technical competence before he was commissioned, the retaining of officers in regular employment or on the half-pay reserve, and promotion to the highest ranks on the basis of seniority. The first of these he fully accomplished; with the others he made significant advances. More than anyone else he laid the foundations of a permanent and professional officer corps. Those officers who rose because of their seamanship and experience learned to aspire to gentlemanly manners and life-style, while those of gentle birth were no longer found wanting on the score of seamanship. Pepys laid thus promoted both technical revolution and social evolution.

Pepys also played a major role in the rise of a professional and non-political Civil Service. He did much to develop the Admiralty and the Navy Office where there was a wider range of jobs to be filled than in any other sector of government service. Many of these jobs called for specialist skills or knowledge and some carried considerable responsibility. As



Samuel Pepys, 1633-1703: "What a man's mind is, that is what he is."

The compleat diarist

Pepys's own career bears witness, the able and dedicated official had unusually good opportunities for inter-departmental transfer between the two departments. The expansion of the Civil Service was a marked feature of later Stuart England and the growth of specialization and departmentalism was particularly marked in the administration of the Royal Navy. Opportunities for advancement, from bottom to top, in the Navy Office were there for every ambitious government servant. But it was Samuel Pepys who first made this astonishing climb and he carried with him other examples of the successful civil servant, most notably William Brouncker, Anthony Deane and Josiah Borchett.

Pepys's greatest successes in public life were achieved in the 1670s and 1680s. Since 1825, however, his greatest claim to fame has rested on the private diary which he started in January 1660 before he had achieved any important public office and which he abandoned in May 1669 just as he was beginning to make a name for himself. Pepys and his contemporaries would have been amazed had they known that his subsequent fame would rest so heavily

on this private journal written at the outset of his public career. After all Pepys deliberately kept his Diary secret and he never made any attempt to have it published. He wrote the Diary in a shorthand cipher and he kept it permanently under lock and key in order to preserve its secrets even from his closest friends and nearest relations.

Scholars have always been puzzled as to why Pepys spent so much of his busy life in the 1660s writing such an enormously detailed diary and why, having kept it so secret, he bound it in six handsome leather volumes which he catalogued and included in his library (that was donated to Magdalene College, Cambridge).

Pepys may have kept the Diary for pleasure so that he could re-read it and remind himself of past enjoyments and triumphs, although there is in fact no record of him using it for this purpose. His Puritan heritage may have encouraged him to account for his time, to record his moral lapses and to examine his conscience at regular intervals. Certainly, at the end of some months and more fully at the end of each year Pepys drew up a balance sheet for both himself and the nation. The Diary may have

stemmed from Pepys's natural interest in order, system, discipline and history. It is undoubtedly full of factual details about the external world, but there is also a great deal about Pepys's inner life. Perhaps a deep need to impose a pattern on the shapelessness of existence and a strong desire to observe and to understand himself led him to keep such a Diary. It is almost as difficult to explain why Pepys preserved his Diary so carefully as to understand why he wrote it. He may have intended that it should be read by future historians, but there is little to suggest a deliberate plot for the ultimate discovery of his own secrets. It is more likely that, as a prodigious effort to explain himself to himself, the Diary became one of Pepys's most treasured possessions and so long as he had it in his keeping he felt he could retain links with the most exciting decade in his life. After his death, while it existed in his library, it could give him a kind of immortality.

That Pepys regarded the Diary as a vital part of his existence is made clear by the deep sadness with which he ended it when his eyesight deteriorated alarmingly. "And so I be-

take myself to that course which is almost as much as to see myself go into my grave - but which, and all the discomforts that will accompany my being blind, the good God preserve me from."

Political and social historians have long recognized the immense value of Pepys's Diary with its great mass of hard factual information. Pepys was very well placed to gather political news and gossip since he spent nearly all his life in the capital and frequently visited the court, Parliament and the Royal Exchange where he had well-placed informants. In taverns, shops, playhouses and streets he talked with all classes of people. Pepys was a marvellous chronicler of the public mood during the early months of the Restoration, the second Dutch war, and the great Plague and Fire of London. His Diary is also full of useful comments on debates in the Commons, on waste and immorality at the court, on James, Duke of York, and on the ministerial changes of 1667-68.

For the social historian one of the great merits of the Diary stems from Pepys's intense curiosity, diverse interests and boundless vitality. He had enormous enthusiasm for ordinary people and everyday life. The Diary is full of detailed and precise information about clothes and furnishings, food and drink, weather and transport, books, plays, music and sermons. Pepys mixed with courtiers and administrators, merchants and seamen, actors and intellectuals, innkeepers, shopkeepers and servants, coachmen and watermen.

Much of what Pepys wrote about his political and social world can now be gleaned second-hand in professional historians' accounts of Restoration England, but, in at least two major respects, the Diary itself still repays very close scrutiny by the interested layman in the present age. Nowhere else can one find so brilliant and so full an account of an actual man as he actually was, and nowhere else can one find better evidence of a man's attitudes towards and relations with a whole range of women.

Perhaps the most astonishing feature of the whole Diary is the fullness and variety of its portrait of Pepys himself. No other diarist has been so incredibly honest or has laid himself as bare as Pepys. His Diary is a microscopic observation of himself as he actually was. Egoistic, selfish and emotional though he was, Pepys succeeded nevertheless in being so detached that he appears in the Diary as both the observer and the observed. He recorded not only his public behaviour and his private even secret, acts, but also his thoughts, feelings, hopes and fears. He reflects confidently in his public achievements and in his private triumphs, but also tortures himself with doubt and self-acquisition. Occasionally, Pepys betrays weaknesses and failings of which he himself was unaware, but he also records numerous acts of which he was clearly ashamed and which he desired to keep hidden from the rest of the world.

Pepys confessed in his Diary when he was in bed, when he suffered from severe constipation, when he struck his servants, when he was fearful of being attacked or robbed, when he showed an unhealthy interest in dead bodies, and when he forced his attentions upon reluctant females. He even admitted that while the city was at war he personally experienced the greatest joy, health and profit in his life. In these instances he asked for God's forgiveness or support. At other times he was less conscious of his selfishness or shameful behaviour. On January 6, 1663 he recorded a quarrel with his wife because she had left some clothes on a coach. "I confess she did give them to me to look after - yet it was her fault not to see that I did take them out of the coach." On August 18, 1667 he visited St Dunstons church, "and stood by a pretty, modest maid, whom I did labour to make by the hand and the body; but she would not, but got further and further from me, and at last I could perceive her to take pins out of her pocket to prick me. If I should touch her again; which seeing, I did fly back, and was glad I did espy her design."

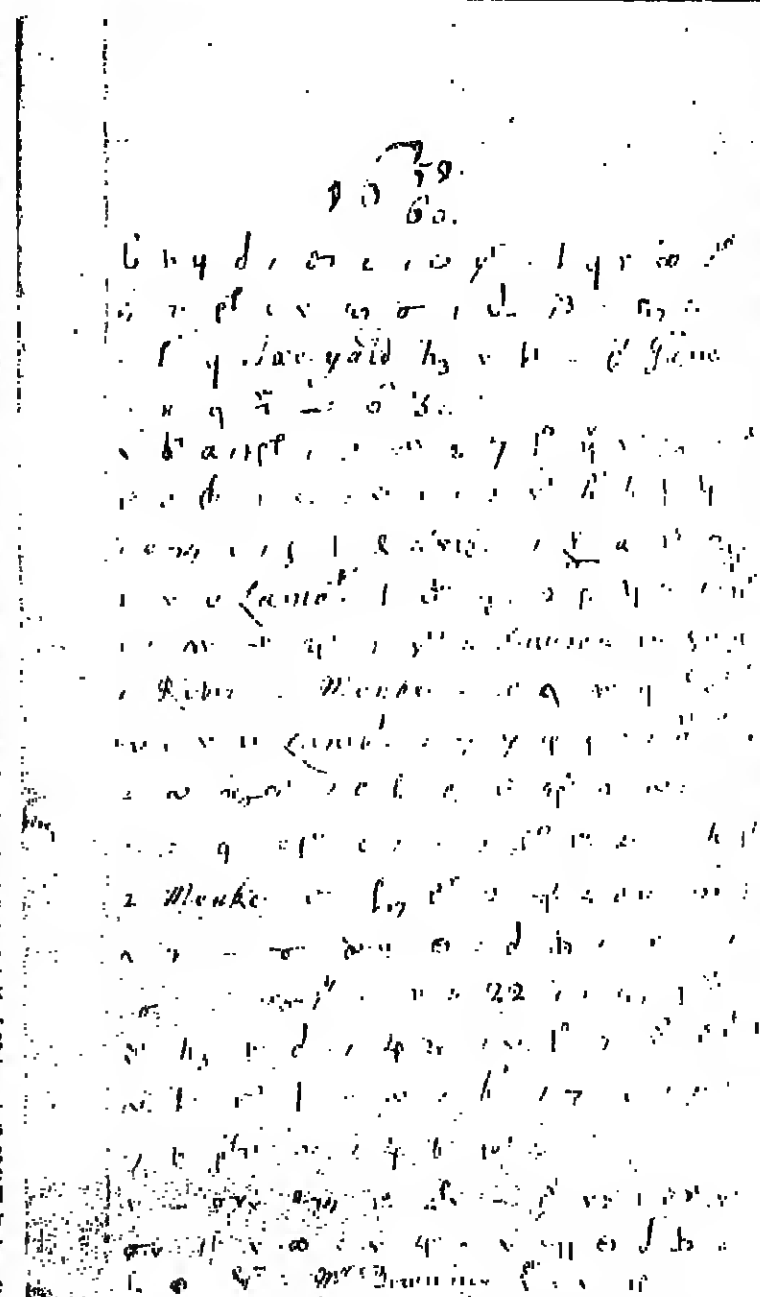
chronicler, administrator, reformer, innovator, bon viveur and womanizer

Pepys's reputation with women has far too long been that of the amorous buffoon who could not keep his hands off women. The Diary is extremely frank about his relations with women, though what Pepys revealed to himself may not be quite the same as what he reveals to us today. Certainly, his relations with women were extremely complex and they covered a whole range of emotions and actions. Pepys had a great admiration for physical beauty in women and he would go miles out of his way to catch a glimpse of a pretty face. He clearly enjoyed the society of women and loved to converse with them. On the other hand, his sexual appetite has often been exaggerated and misunderstood. While occasionally lecherous he does not appear to have regarded the sexual urge as a liberating force or the sexual act as a fulfilment of the personality. He was usually ashamed of his sexual escapades and he was invariably concerned only with his own immediate pleasure. There are few indications that he ever thought about the sexual needs and desires of his partners. On the one occasion when he did record that he had produced a strong sexual reaction in his wife, on February 7, 1669, he took flight and decided to be more careful in the future. His affairs with other women were always cautious and calculating, and usually cold-blooded. The were never with his social equals or superiors, despite his erotic dreams of Lady Castlemaine, but always with servants, actresses, prostitutes or women seeking his official help. Pepys often took callous advantage of these women, even to the extent of employing some physical force, and yet he despised them whenever they gave in to his demands. The strongest impression left by his sexual exploits is not that of him genuinely enjoying intimate relations with the opposite sex, but of him being rather afraid that women might gain a hold over him. This reinforced his determination to exercise power over them.

Pepys's relations with his wife are particularly interesting, complex and unpredictable. It was a childless marriage which oscillated between affectionate intimacy, violent quarrels and even estrangement. Pepys admired his wife's beauty and took pride in her appearance; often to the extent of regarding her as a prized possession. Despite his own numerous affairs, he was extremely jealous when other men took an interest in his wife. Though concerned about the state of her health, he was often irritated when severe monthly periods confined her to bed. Often extravagant himself and delighting in his freedom, he always kept his wife short of money and refused to allow her an independent existence. And yet there was another side to their relationship. Pepys married her for love, when she was young and penniless. He thoroughly enjoyed talking matters over with her, they shared a variety of social activities together, and he encouraged her interest in arithmetic, painting, music and dancing. There is abundant evidence that he often enjoyed her company, usually wished to be on good terms with her and occasionally valued her judgment. None the less, the dominant feature of their marriage was Pepys's constant efforts, and repeated failures, to control his wife so that she might serve his ends and not expect too much from him in return. While Pepys may have had male chauvinist tendencies and often wished to play the tyrannical husband, he was never able to dominate his wife for very long. That he did not succeed is a tribute to his wife's fighting qualities and an indication that husbands could not always control their wives even when the patriarchal theory was at its height. That we know this is a testimony to Pepys's honesty in recording his constant and unsuccessful struggle for dominance. Pepys's frankness, and his intense interest in the external world and his inner life, have combined to produce the most informative and the most fascinating diary in the English language.

The evidence for this comes from a recently published report, *First Year Quantitative Methods on Business Related Degree Courses in England and Wales*. This investigation was undertaken by a group of enthusiastic polytechnic lecturers at Birmingham Polytechnic, in part as a

The author is professor of modern British history at the University of Edinburgh.



The opening page of Samuel Pepys's Diary, written in his characteristic shorthand. The introduction, undated, but preceding the entry for January 1, 1660, begins: "Blessed be God, at the end of the last year I was in good health without any sense of my old pain but upon taking of cold. I lived in Axe-yard having my wife and servant Jane, and no more in family than us three." Reproduced by permission of the Master and Fellows, Magdalene College, Cambridge.

After a decade and a half of its existence Conall Boyle asks . . . Has the CNAA experience been worth it?

Launched in the 1960s during the white heat of Harold Wilson's technological revolution, the Council for National Academic Awards was hailed as a bold innovative stroke. At last the newly formed polytechnics could escape the strait-jacket of the London University external examinations. The CNAA was not only to be the validating body for the new institutions. In keeping with the intentions of the founders of the polytechnics, the CNAA was to encourage newer, more imaginative approaches; cross modular subject groupings were to be encouraged. To achieve these ambitious aims, the CNAA required that all courses be developed by inter-disciplinary course development teams.

After a decade and a half, how have these deals been implemented? A full-scale review which looked at generalities might show that much progress has been made: several hundred new degree schemes approved and running, a vast army of graduates through the system. However, more recently evidence has come to light which seems to indicate that the current CNAA degree schemes are little different from the old schemes they in part replaced; and that innovation, where it has occurred at all, is to be found in the university sector.

The evidence for this comes from a recently published report, *First Year Quantitative Methods on Business Related Degree Courses in England and Wales*. This investigation was undertaken by a group of enthusiastic polytechnic lecturers at Birmingham Polytechnic, in part as a

preparation for a new CNAA degree re-submission. Quantitative methods, mathematics and statistics is traditionally a difficult subject. Students dislike it because it seems unrelated to their main stream subjects, and is often taught in an unimaginative way. Here, surely is an area where the CNAA philosophy could blossom? There are plenty of alternatives to the traditional approach.

So what did the investigation reveal? After all those colleges sat down to design their degree courses in the light of their experience, you would expect a wide divergence of topics, approaches, time spent on the subject. Not a bit of it. Out of the 183 courses investigated, the outstanding feature was their uniformity. In the case of accountancy degrees this uniformity was almost total. In vain does one search for the college that adopts an integrated subject approach. Nowhere is the kind of modern medium-based approach to statistics proposed by J. W. Tukey to be found. On degree after degree, the same old menu of topics, dealt with in the same way are to be found. It is as if the CNAA had never existed, and London External still ruled.

In fairness one should point out that some divergence of topics was to be found - in the university sector. It would also be right to point out that this variety took the form of a somewhat idiosyncratic choice of topics, whose relevance to business is difficult to discern.

Perhaps the most surprising finding of the investigation is that it was necessary at all. The CNAA already

The making of a navy

After the *Diary*, Samuel Pepys's most concrete contribution to English life was his reform of the Navy. We are nowadays accustomed, even after a war in the South Atlantic which demanded the temporary requisition of merchant ships, to a complete separation of the merchant marine and the Royal Navy.

The Navy of Drake or Hawkins was not an autonomous, permanent and systematic military force. There was no proper career structure, no central naval authority, no uniform. Merchant ships, like the cumbersome 500-ton *East Indiamen*, were routinely armed to protect them from privateers and the vessels of rival nations on their months-long voyages from home. In time of war, it was perfectly usual to put these ships in the fighting line. The Navy was, before Pepys, a ramshackle, ad hoc affair.

During the seventeenth century, England supplanted Holland as the world's leading maritime power. The requirements of distant commercial interests increasingly called for a powerful, centrally organized navy. Pepys recognized very quickly that the basis of such a navy would be a cadre of professional seamen of the officer class. Before his time, there had been no tradition of continuous service and fighting naval officers were accustomed to signing on for duty on merchant ships during periods of relative tranquillity.

There had developed a deep social and political fissure in the Navy between the "bred seamen" or "turpitudes" and the royalist "gentlemen", courtiers, favourites, amateurs, who were placed in senior positions after the Restoration. Pepys was nothing if not shrewd; though irritated at the incompetence and insubordination of royal placements, he knew that they provided a powerful political lever. The first steps towards the establishment of a permanent officer corps were taken in 1677 with the introduction of an examination for the rank of lieutenant, a rank which henceforth required three years' active service as a midshipman.

Commissions were in the gift of the King and Lord High Admiral. Pepys's Navy Board, which he had taken over in 1673, was concerned with the maintenance of ships, dockyards, victualling and pay; they also looked

after guns and ammunition. Traditionally, only the standing officers, the gunner, the cook, the boatswain and the carpenter, came under the direct jurisdiction of the Navy Board. Increasingly, though Pepys's board, with its powerful aristocratic membership, took independent responsibility for commissioning officers. Ironically their executive authority very closely resembled the naval administration of Cromwell's Commonwealth.

The new Navy demanded colossal expenditure but brought immense gains. The prize ships captured from the Dutch vastly increased the size of the Navy and simultaneously increased its power and the difficulties of administering it. A massive battle fleet of scores of fighting ships demanded a clear hierarchy of command. The fleet was thus divided into distinct squadrons - the Red and White, the Blue and the Red and Blue - and power was devolved through the creation of the command ranks: admiral, vice admiral and rear admiral.

Pepys was equally shrewd in his reform of the Navy's finances. He was well aware that in any operation so large and diversified, some degree of corruption and self-serving was inevitable. It would be fair to say that, rather than stamping out fraud, Pepys rationalized it. The establishment of a rational pay system and the commissioning of men to fully equip ships and dock's expenses streamlined the system and made it more effective.

Pepys knew well enough the value of compromise and recognized the sources of his power and the responsibilities he owed his masters. He was no revolutionary. It would be inaccurate to claim that single-handedly, he created the modern Royal Navy. Nor did he solve all the problems that English naval power had suffered from Drake onwards. The mistakes of the eighteenth and nineteenth centuries prove that. However, by accepting the logic of England's new historical role and by taking full advantage of the political structure of Restoration England, he shaped a powerful military force which operated without fundamental change or reform until the First World War and the first cracks in the Empire which Pepys had done so much to foster with his Navy.

from this system. The syllabus laid down tended to ossify, and become stale. It also allowed no input from some of the people who knew what could be learned best - the classroom teachers. The need for an up-to-date syllabus in statistics as in other subjects has become more acute in the last couple of decades, especially with the advent of the micro-computer. Rather than going back to an old, but flawed model, we should look to a CNAA-based system which is less wasteful of the time of lecturers, and also allows, indeed encourages, sensible and necessary innovation.

As a first step, the CNAA could issue an advisory syllabus along the lines of the current consensus. This could then be inserted without further embellishment in any course. By means of conferences, surveys or from specially convened panels, alternative schemes could be proposed. Such proposals would gain stature by going through a type of validation process at the CNAA. As each new scheme comes out, lecturers would have a chance to comment; in this way we would not lose what is undoubtedly a strength of the present system: lecturers participating. But participation, however desirable, should never be achieved at the expense of the main-stream activity of a teacher, namely to teach (and not to sit on committees discussing course development).

The author is senior lecturer in mathematics and statistics at Birmmham Polytechnic.

The Massachusetts Institute of Technology
THE MIT PRESS
128 Buckingham Palace Road, London
SW1W 9SD

BOOKS

Modern Socratic tutorials

Plato's *Protagoras* and *Phaedrus* are a translation of the dialogues and a commentary. Both are excellent, and together they make this an unusually enjoyable and rewarding book to read and to study. The translation combines accuracy with felicity. The felicity is not a kind of uniform elegance but a sensitive appropriateness: pleasantly colloquial stretches of dialogue read pleasantly and colloquially, pompous speeches sound pompous in the English, parodies read like parodies. (Here is a tiny example. The doorman, irritated when some callers he has already sent away knock again, utters words that might be rendered literally: "O men, have you not heard that he is not at leisure?" This would of course be found ludicrous and repellent by the normal reader - though many translations do give equally stiff and unnatural renderings of such utterances. In the present version we get just what you might expect from a Socratic colloquialist: "Hey you, didn't you hear me say Master's busy?") The requirements of accuracy also vary. For whereas in narrative and chat an ordinary correctness of translation is sufficient, in passages of close philosophical argument details of vocabulary and structure should if at all possible be meticulously preserved. Here again the translators are remarkably successful.

To each section of the translation there corresponds a section of the commentary. This is, as advertised, a "Socratic commentary": it consists almost entirely of questions. These are cunningly arranged, so that later questions on a given stretch take for granted that earlier questions have been pondered. Nobody will get profit of pleasure by reading straight through the commentary without thinking for himself about the issues. But the reader who plays the game, puzzling over one question before moving on to the next, will find his understanding deepened by the increasingly probing questions, and he will enjoy the process.

The questions deal with all the strands in the *Protagoras*. They direct attention to dramatic structure and literary features, to characterization and the interplay of personalities, and (above all, naturally) to the sequence of thought and the analysis of arguments. The reader is forced both to get clear what is going on in the arguments and to think for himself about the issues raised. The commentary is not really interested in (or good at) close philosophical argument, and the philosophers are not really interested in (or good at) sensitive literary interpretation. Professor Dörter hopes to bridge the gap, and to do justice to both sides of the *Phaedrus*. Since the dialogue contains a wide range of important subjects, he hopes that his interpretation of it will increase understanding of Plato's philosophy in general.

How far has Dörter succeeded in combining the two approaches? He has wisely abstained from the wild inferences and vague speculations sometimes made by the literary school. On the positive side, his emphasis on the organic structure of the dialogue is illuminating, and he brings out connections and echoes that might easily be missed; he makes us attend to recurrent themes as well as to discrete stretches of argument. In the end, however, the non-philosophical points he notes or emphasizes play a relatively slight role in his interpretation of the argument and drift of the *Phaedrus*; they serve in confirm or to decorate rather than to establish any conclusions. It is no doubt self-evident that a full understanding of a Platonic dialogue requires sensitive study of it as a work of literature. It is less clear and less well shown that such a study has much to contribute to a full understanding of the philosophical issues and arguments in the dialogue.

Dörter's own account of the structure of the *Phaedrus* and his interpretation of its particular arguments (some of which he has already treated in published papers) contain a number of original ideas and suggestions. They are not always formulated with sufficient clarity, and they are not always supported by sufficient evidence. Some of the suggestions are so clearly wrong that they need to be rejected.

versions of passages he quotes, and these contain quite surprising errors and omissions. In short, the book will be safer in the hands of mature Platonists than in those of innocent beginners. The former will find it interesting and thought-provoking.

The *Protagoras* volume contains a translation of the dialogue and a commentary. Both are excellent, and together they make this an unusually enjoyable and rewarding book to read and to study. The translation combines accuracy with felicity. The felicity is not a kind of uniform elegance but a sensitive appropriateness: pleasantly colloquial stretches of dialogue read pleasantly and colloquially, pompous speeches sound pompous in the English, parodies read like parodies. (Here is a tiny example. The doorman, irritated when some callers he has already sent away knock again, utters words that might be rendered literally: "O men, have you not heard that he is not at leisure?" This would of course be found ludicrous and repellent by the normal reader - though many translations do give equally stiff and unnatural renderings of such utterances. In the present version we get just what you might expect from a Socratic colloquialist: "Hey you, didn't you hear me say Master's busy?") The requirements of accuracy also vary. For whereas in narrative and chat an ordinary correctness of translation is sufficient, in passages of close philosophical argument details of vocabulary and structure should if at all possible be meticulously preserved. Here again the translators are remarkably successful.

To each section of the translation there corresponds a section of the commentary. This is, as advertised, a "Socratic commentary": it consists almost entirely of questions. These are cunningly arranged, so that later questions on a given stretch take for granted that earlier questions have been pondered. Nobody will get profit of pleasure by reading straight through the commentary without thinking for himself about the issues. But the reader who plays the game, puzzling over one question before moving on to the next, will find his understanding deepened by the increasingly probing questions, and he will enjoy the process.

The questions deal with all the strands in the *Protagoras*. They direct attention to dramatic structure and literary features, to characterization and the interplay of personalities, and (above all, naturally) to the sequence of thought and the analysis of arguments. The reader is forced both to get clear what is going on in the arguments and to think for himself about the issues raised. The commentary is not really interested in (or good at) close philosophical argument, and the philosophers are not really interested in (or good at) sensitive literary interpretation. Professor Dörter hopes to bridge the gap, and to do justice to both sides of the *Phaedrus*. Since the dialogue contains a wide range of important subjects, he hopes that his interpretation of it will increase understanding of Plato's philosophy in general.

How far has Dörter succeeded in combining the two approaches? He has wisely abstained from the wild inferences and vague speculations sometimes made by the literary school. On the positive side, his emphasis on the organic structure of the dialogue is illuminating, and he brings out connections and echoes that might easily be missed; he makes us attend to recurrent themes as well as to discrete stretches of argument. In the end, however, the non-philosophical points he notes or emphasizes play a relatively slight role in his interpretation of the argument and drift of the *Phaedrus*; they serve in confirm or to decorate rather than to establish any conclusions. It is no doubt self-evident that a full understanding of a Platonic dialogue requires sensitive study of it as a work of literature. It is less clear and less well shown that such a study has much to contribute to a full understanding of the philosophical issues and arguments in the dialogue.

Dörter's own account of the structure of the *Phaedrus* and his interpretation of its particular arguments (some of which he has already treated in published papers) contain a number of original ideas and suggestions. They are not always formulated with sufficient clarity, and they are not always supported by sufficient evidence. Some of the suggestions are so clearly wrong that they need to be rejected.

Greek theories of hedonism

The Greeks on Pleasure
by J. C. B. Gosling and
C. C. W. Taylor
Clarendon Press: Oxford University Press, £22.50
ISBN 0 19 824666 8

To decide "how best to live" we must know what ends to pursue. Pleasure seems self-evidently desirable; but reflection upon the long-term dangers of sybaritism makes us search for other accounts of happiness. Since Greek ethics tended to seek justification in the happiness of the moral agent, Greek moral philosophers typically gave some account of the status of pleasure in the good life. Indeed it is surprising that we have lacked comprehensive surveys of the history of Greek hedonism. Now, however, J. C. B. Gosling and C. C. W. Taylor's *The Greeks on Pleasure* brings together the scattered controversies into a significant whole.

Inevitably, the book is dominated by Plato, Aristotle and Epicurus; but there is also brief treatment of the early literary sources, and some discussion of other philosophers - Democritus, Aristippus, Eudoxus and the Stoics - as well as some rather cagey material on Socrates. In general the authors grasp scholarly nettles with courage and decision. They present us with consistent and coherent theories of pleasure in Aristotle and Epicurus, and a straight line of development in Plato from the *Protagoras* right through to the *Philebus*.

At times, this attention to controversy upsets the balance of the book. For minutes of interpretation take up a good deal of space and obscure the overall structure of argument. At times, too, the argumentation is opaque, and could have been clarified by better schematization. That said, the book comes up with exciting and original reinterpretations of the cruces of the Aristotelian and Epicurean theories of pleasure. In the latter case the authors argue that the distinction between *klaia* and *katastemata* pleasures can be brought into line with an overall theory of pleasure, not mere insensibility. For Aristotle they dispute both the traditional view that the two accounts of pleasure in the *Nicomachean Ethics* are inconsistent and G. E. L. Owen's explanation of this in terms of shift in Aristotle's project. On the contrary, both passages view pleasure as perfect actualization, as Aristotle maintains, albeit against different opponents, that "in some sense pleasure is the good". This ethical thesis is underpinned by, and coherent with, Aristotle's metaphysical account of potentiality, actuality, process and change. The argument against Owen is not always convincing. It is, largely negative; Owen's claim that the book's ten material is concerned with "the logic of pleasure" - verbs, it is argued, is ill-founded. But the argument, exhaustive though it should be, fails to consider the evidence of cross-reference to the *Physics*, where the behaviour of verbs, particularly with reference to the instantaneous "now", dominated a discussion which is linguistically not practical nor ethical. But the conclusion that pleasure is a formal cause, excellently drawn - challenging and ultimately extremely persuasive.

The earlier chapters on the rich material from Plato are not a search for controversy, but rather an analysis of the fascinating respect for a hedonist basis for ethics. With a generous view of Plato's attitude to hedonism they diagnose his intention as primarily to the physical pleasures of sybaritism, prone to the uncontrollable and non-rational effects of luck. In this way the apparent divergence of *Protagoras* and *Gorgias* is reconciled as a difference of project, rather than a radical change of doctrine. Throughout Plato is represented as trying on various general theories of pleasure, but frustrated finally in the *Philebus* when he realizes that pleasures are so dissimilar that they cannot be classified together or unified under a single theory. De-



A bust of Epicurus, taken from *The Sculptured Word: Epicureanism and Philosophical Recruitment in Ancient Greece* by Bernard Frischer, (California University Press, £24.00).

spite this view of the *Philebus*, the entire discussion of Plato is heavily influenced by that late work. This is nowhere more true than in the account of pleasure in *Republic IX*. The concerns of the *Philebus* and those of the *Republic* are seen as coherent, albeit different in conclusion, and the epistemological background of both works is, it is im-

Life of a city

Thebes in the fifth century: Heracles reemergent
by Nancy H. Demand
Routledge & Kegan Paul, £9.95
ISBN 0 7100 9288 1

"Boo! Boo! swine." Such was the immortal insult hurled against the Thebans and other ancient Boeotians by their sleeker and sharper neighbours in Athens. As if to prove the point, one of the 10 well-produced volumes in Nancy H. Demand's slim volume (a revision of a 1978 Bryn Mawr dissertation tailored for Routledge's regional series) depicts a handsome terracotta porker, indisputably Theban in origin and conception. Yet it is very far from Dr Demand's intention to endorse this antique caricature. The clay pig, for example, characteristically serves her both as an illustration of Theban attitude originally and, since it was found in a Greek city of southern Italy, as the stimulus for an imaginative meditation on possible philosophical connections between Thebes and the Pythagorean communities of the *mezzogiorno*.

Imagination, though, has its costs as well as its benefits. Dr Demand's aim of writing a rounded social and cultural history, not just a tale of battles and political power-struggles, is of course laudable in principle; and her chapters on the religious cults, philosophy, music and poetry, and visual arts of Thebes in the fifth century BC do certainly highlight the ingredients missing from John Bueckler's otherwise admirable recent study of Thebes in the fourth century. But even Dr Demand cannot avoid the limitations of the contemporary, objective, quantitative and directly relevant evidence. The reader is left with the impression that what few strands of such evidence there are available have been too often teased, twisted and stretched beyond their natural capacity to inform.

Not, it seems to me, does Dr Demand help her case for a broader consideration of the cultural and intellectual life of the city by continuing her attention to the fifth century. 399 is of course a great improvement on 431, the terminal date of R. J. Buckle's recent Boeotian history, but it is in no sense a natural break. Moreover, by choosing to end here she has denied herself the possibility of revealing more than tantalizing glimpses of what is surely Thebes's most interesting and best documented epoch, the first half of

the fourth century. For example, her long and stimulating chapter on philosophy in Thebes, in which she draws attention to the influence of the Pythagorean émigré Lysis, can only make us desiderate a full discussion of the contemporary view that Thebes did not become powerful until in the early fourth century her leading men became philosophers. So too, although institutionalized pederasty is succinctly and tellingly analysed, its decisive military application in the form of the Sacred Band (150 couples) receives only a mention, since this was a crux of the 370s.

But it is perhaps her crisp account of the sophisticated federal organization of the Boeotian League which most suffers from this chronological Procrusteanism. Some sort of loose political confederacy was in existence by the late sixth century, but Dr Demand argues cogently that the League established in 447 was essentially a new body brought into being under the aegis of Thebes. She could have added that initially it had the support of Sparta, who thereby made an exception to her normal policy of dividing and ruling her subject allies.

However, our only detailed and useful description of this Boeotian League is to its internal organization in 335: just before Sparta, reverting to type, detached from it Thebes's main rival Orchomenos. Nine years later, Sparta formally dissolved the League, so that when Thebes was founded it yet again in 378 was in express defiance of Spartan wishes and correspondingly on democratic, no longer oligarchic, lines. To omit these fourth-century vicissitudes is inevitably to distort the proper historical perspective.

In 335 BC Thebes was razed to the ground by Alexander the Great as a warning to other potential Greek rebels against the Macedonian Great Idea. The only secular building he deliberately left standing was the temple of Athena, which was to be a reminder of the city's past. But in the long view it was the sparing of Pindar's house and not the obliteration of Thebes that is surprising. For in struggling relentlessly for the unchallenged hegemony of Boeotia, Thebes had herself directly and indirectly contributed to the destruction of several other Boeotian cities, most notably the recurrent Plataea. No amount of imaginative reconstruction of fifth-century Thebes as a flourishing centre of high culture should be permitted to obscure the brutality of her *Realpolitik*.

Paul Cartledge

Paul Cartledge is a fellow of Christ College, Cambridge.

BOOKS

Balance of life

Lamarck the Mythical Precursor:
a study of the relations
between science and ideology
by Madeleine Barthélemy-Madaule
translated by M. H. Shank
MIT Press, £14.00
ISBN 0 262 02179 X

Lamarck was the pre-eminent French natural scientist in the interregnum between Buffon and Cuvier, but he achieved none of their worldly success and was scarcely read in his own day. In part this was because his elegant prose put him off from a popular audience, in part because his ineptitude at winning state patronage left him isolated even in the scientific world.

His failure to command any public interest in Napoleonic France, however, is also attributable to the fact that he was a figure of the Enlightenment who had outlived his time. Most of the leading philosophers had died before the Revolution, and such distinguished men of science as his generation as Lavoisier and Condorcet died in it. Lamarck, by contrast, was in his sixties and seventies in the first two decades of the nineteenth century when his most significant publications appeared.

The great age of natural history from which he sprang was then nearing extinction, and an unfamiliar science of biology (though he helped coin the word) was only just beginning to bud. With abstract systems of ideas discredited by a Revolution said to proceed from too much of them, moreover, few self-respecting members of a newly professionalized scientific community (except his one protégé, Geoffroy Saint-Hilaire) could risk attempting the lofty synthesis between zoology and philosophy on which he set his sights.

Nor did he win friends and influence people abroad. Charles Lyell was at once impressed and troubled by his theory of the transformation of species in the *Philosophie zoologique*, but Darwin - of whom Lamarck is still often alleged to be the main precursor on just this subject - defined him as having learned nothing from him and ungraciously suspected him of having plagiarized the work of his grandfather. Even Cuvier's eulogy continued to damn him with faint praise by charitably misdescribing his ideas so as to make them seem absurd. Almost the last survivor of a defunct species, Lamarck died blind and penniless in 1849 and was duly buried in a common grave.

His debts to Enlightenment philosophy and his divergences from Darwinism have been the subject of commentaries before, but Madeleine Barthélemy-Madaule's *Lamarck: the Mythical Precursor*, originally published in French in 1979, neatly grounds his divorce from the one in his betrothal to the other. On the one hand she shows how Lamarck's conception of a natural economy and the fundamental balance of life drew him progressively closer to a Linnean picture of the Universe in which cosmic harmonies were responsible for each niche filled by the Earth's diverse flora and fauna.

In his account of the transformation of species, first conceived around 1800, Lamarck of course abandoned the Exist God of Creation to both Linnaeus and Cuvier, as well as he himself had earlier, adhered, and he also took issue with the divine order of things which joined living and inert matter in equilibrium, so that the providential God he unframed and cast off stage was replaced by a beatified vision of God's Nature, an ideologically over-loaded "God of the Enlightenment" as the author puts it with a "sentimental" disapproval in the early 1930s. However, Imperial began to benefit from government's view that

Madaule shows how Lamarck's theory of the development of natural variation (including the inheritance of acquired characters) was conceived in a serial frame of reference wholly distinct from that of Darwin. Believing that the stability of plants and animals was proportional to the stability of their conditions of life he argued that change in environmental circumstances must alter needs to the same degree, which in turn must affect the use of organs and as a consequence prompt modifications in them, which, finally, could be transmitted to offspring indefinitely, leading to the transformation of species. For Darwin, however, variation was a function not of sequence but of structures, in which organic changes - whose remote origins were in doubt - possessed different utilities for survival, with natural selection by preserving the advantageous change accounting eventually for the origin of new species. Utility in Darwin's doctrine differs from use in Lamarck's in that it does not of itself give rise to the modification of organisms, so that what appears as a physiological postulate operating with respect to each phenotype in the one theory works in the other case only at the level of zoological populations.

These themes and others are taken up with much sophistication by

Imperial vision

Science for Industry: a short history of the Imperial College of Science and Technology and its antecedents
by A. Rupert Hall
Imperial College of Science and Technology, £6.75 and £3.50
ISBN 0 85287 143 0 and 144 9

In 1907 the Imperial College of Science and Technology was established to promote advanced teaching and research in science, especially in its applications to industry throughout the empire. The college was also intended to create in South Kensington a unified and superior version of Charlottenburg, Berlin, where industrial research was carried on by two adjacent but separate institutions (the *Physikalisch-technische Reichsanstalt* and the technological university). At the same time Imperial was designed to exorcise the embarrassing spectre of the highly successful Imperial Engineering College at Tokyo.

The main burden of Professor Hall's main thesis is that Imperial history is to show that this grandiose scheme was not easily implemented: time after time reveals that intention was one thing, achievement another. From its inception Imperial faced formidable obstacles. Far from enjoying the advantages of being founded *de novo*, it was composed of three previously separate colleges which found it difficult to act as a harmonious trinity. Administratively at least seven public bodies handled the college's daily business, not surprisingly generating problems of authority. Inevitably there erupted the delicate question of the relation of the college to the University of London, a matter which was acrimoniously debated until the late 1920s when the college became a constituent institution of the university and its students could gain the coveted London degree.

Such difficulties hardly encouraged the various activities envisaged by the college's founders. Up to 1914 research was undistinguished, the level of teaching elementary, and the college generally regarded by University of London Colleges. From 1914 to 1950 the dream of a London Charlottenburg remained remote. Intra-war depression took its toll: by the early 1920s the college had lurched into deficit financing; and in the 1930s, even with the redoubtable Henry Tizard as Rector, the student population dropped steadily.

The spirit of post-war reconstruction did not animate the Centennial Appeal of 1945. Its modest success indicated that in future the college would prosper, but the state-injected "God of the Enlightenment" as the author puts it with a "sentimental" disapproval in the early 1930s. However, Imperial began to benefit from government's view that

Barthélemy-Madaule, whose account is more clearly informed by an overarching conceptual framework than most studies of Lamarck, although it provides a less comprehensive and well-documented guide than Richard Burkhardt's *Spirit of System*. About Lamarck's pioneering and magisterial study of invertebrates, for instance, perhaps his most important work of all - she has relatively little to say. Her book is also of uneven quality, rather better on the contrast with Darwin than on the eighteenth-century background, but its main fault is its too frequent manner of identifying Lamarck's views by way of commentaries on other authorities. Such an approach ill befits an endeavour to locate his moaning in the ideological contexts of his own day rather than as a failed prefiguration of Darwin, and to that extent the work resembles a disassembled performance viewed under a periscope - unnecessarily oblique and stiff-necked, like a giraffe feasting on snails. Nor are readers as well served as they should be by this translation, which is full of extravagant gallicisms and more than a fair share of misprints.

Robert Wokler

Robert Wokler is lecturer in government at the University of Manchester.

Improved technological education would promote increased industrial production. This economic concern motivated the college's jubilee expansion of buildings, costing £20,000,000 between 1953 and the mid-1970s. Ironically the London Charlottenburg at last arose when the imperial vision had long vanished and British industrial competitiveness was declining.

Hall tells his story with characteristic skill and zest, indulging in racey jokes about the horny-handed provinces. Though an emeritus professor of Imperial, he has clearly not succumbed to the temptation of writing hagiographic history. Given these virtues, it is a pity that Hall was presumably constrained by the genre of the short history. He offers few references, only a three-page table of principal references, and neither bibliography nor index. His text concentrates on such staples of institutional history as buildings, finance, administration, and vignettes of the leading staff: I would like to know more, however, about industrially sponsored or orientated research at the college and about the careers of its students in industry or elsewhere.

The centennial historian of Imperial for research. At the same time he or she will surely draw widely on the work of Lawrence Stone on the student as a social phenomenon, and on the statistical approach to archival material which Terry Shinn has exploited so well in his recent account of the *école polytechnique*, *Savoir Scientifique et Pouvoir Social* (Presses de la Fondation Nationale des Sciences Politiques, Paris, 1980).

J. B. Morrell

J. B. Morrell is lecturer in the history and philosophy of science at the University of Bradford.

Newton scholars

Contemporary Newtonian Research
edited by Zee Becher
Reidel, Dfl 95
ISBN 90 277 1303 0

It is hard to know what this rather uncoordinated collection of essays is meant to achieve. For while the quality of the seven individual contributions is high, the theme that students of Newton's alchemical interests have been wasting their time. But even Cohen allows that Newton's ideas about forces in the years just before the publication of the *Principia* (1687) may have been "inert" by his alchemical background, and it would certainly seem that the alchemical roots of Newton's mathematics have the full right to the title of "Newton scholar" and understand the temptation, and I only regret that modesty forbids Whiteside to make his assertion more categorically. Of all the Newtons who appear in this volume, his "Newton the mathematician" is especially plausible. For this reason, we must all regret the valedictory nature of Whiteside's conclusion. If indeed "the play is done", as far as Whiteside is concerned, it must be hoped that there will be fellow-scholars willing to follow in his distinguished way.

Robert Fox

Robert Fox is reader in the history of science at the University of Lancaster.



Bonaparte visits the French countryside. Illustration taken from *The King's Garden*, an English translation of Marguerite Duval's history of botanical exploration and discovery, *La Pénée des Fleurs*, published by the University Press of Virginia at \$14.95.

amid the detailed textual criticism of both manuscripts and printed sources in which modern Newtonian scholars excel.

As a contribution to what I take to be the main thrust of the volume, I. B. Cohen's very long paper (occupying over a third of the book) is clearly of special importance. For Cohen, the new concept that set Newton on his path to the discovery of universal gravity and gravitational celestial mechanics about 1680 was centripetal force. The concept, as he argues, had its roots not in alchemy but rather in the suggestive promptings of Hooke which were then creatively transformed in accordance with the unique "Newtonian style" of analysis.

It was this style which allowed Newton to sustain two distinct levels of discourse in the *Principia*: the mathematical (concerned with establishing a mental construct independent of reality) and the physical or experiential (in which Newton grappled with nature as perceived through the senses). Such an interpretation might be taken to imply that students of Newton's alchemical interests have been wasting their time. But even Cohen allows that Newton's ideas about forces in the years just before the publication of the *Principia* (1687) may have been "inert" by his alchemical background, and it would certainly seem that the alchemical roots of Newton's mathematics have the full right to the title of "Newton scholar" and understand the temptation, and I only regret that modesty forbids Whiteside to make his assertion more categorically. Of all the Newtons who appear in this volume, his "Newton the mathematician" is especially plausible. For this reason, we must all regret the valedictory nature of Whiteside's conclusion. If indeed "the play is done", as far as Whiteside is concerned, it must be hoped that there will be fellow-scholars willing to follow in his distinguished way.

Robert Fox

Robert Fox is reader in the history of science at the University of Lancaster.

BOOKS

Ethics in practice

In That Case: medical ethics in everyday practice
by Alastair V. Campbell and Roger Higgs
Darton, Longman & Todd, £4.50
ISBN 0 232 51557 3

The arousal of public awareness about who gets renal dialysis, the criteria of death before transplantation, and now the use, for experiment, of "spare" human embryos up to 14 days old has at last opened medical ethics to lay examination and open intervention.

The average clinician, however, can rest secure that he will never be involved in such agonizing decisions, and may revert to the usual acceptance of clichés ("at least do no harm" and "not striving officiously to keep alive" and so on) and confusion between ethics and professional etiquette. Indeed most doctors, while endeavouring to practise to the highest practicable standards, would have trouble in providing a watertight definition of ethics, or in setting out their own ethical principles explicitly.

It would be a pity if the attention that is focused on those exotic affairs, important as they are, detracted from general professional reappraisal of ethical behaviour. Ian Kennedy in his curatorial egg Reith lectures did establish two crucial points: first, that the ethical component of every decision must include consideration of the patient's autonomy and wherever possible involvement in the decision-making process; and second, that most medical education is grotesquely inadequate in the way that it addresses ethics.

The pressure from women to have surgery in both the place and manner of their delivery is probably the tip of an iceberg: its impact accentuated by being a direct challenge to the technocracy which has, so far, in the main, failed to comprehend the nature of the protest. (These women were recently characterized as "defiant" by one leading gynaecologist and as "a mixture of Seventh Day Adventists, homophobes and other oddities" by another). The stakes are high: one has only to look across the Atlantic to see a medical profession that has largely lost the trust of the section of the people it is supposed to serve, who feel that its ethical imperatives are self-interest, self-protection, and self-aggrandizement.

This book by Alastair Campbell and Roger Higgs (senior lecturers in Christian ethics at Edinburgh and general practice at King's College Medical School respectively) could be an important corrective in that it forces us to pay attention to the ethical components of much more everyday case history. We are taken, even by event, through the turbulent life of "Angie" whose teenage pregnancy coincides with her father's death from a heart attack and whose delivery is followed by postnatal depression, possible child neglect, and the danger of non-accidental injury.

Quite relentlessly the authors make us consider at every stage first whether the decisions made took adequate account of the patient as a person and second that where decisions were taken "for the good of" or "in the best interests of" how we and the workers concerned define "good" and "best". At the end of every chapter are exercises for the reader to consider as an individual or better still as a member of a group of general practitioners or a mixed group of GPs and other health workers, or even a mixed group including patients. These are carefully chosen, many of them based on cases reported in the *Journal of Medical Ethics* and follow neither easy solutions nor the neat customary "escape routes" of a quickie and almost reflexively accepted as the story by which the case is to be handled. They are not, certainly, to be taken as a guide to what one should do, but as a means to be brought to a state of mind in which one can

practice, given to his or her trainee, and borrowed back at the first opportunity! It will be an excellent sourcebook for the rising number of small groups of GPs who are carving out their own continuing education in response to perceived need rather than the prejudices of district clinical tutors. The fact that it is set in general practice does not preclude its use by specialists of consultant or training grade. They work in the doctor controlled environment of the hospital in which the adoption of the "best buy" treatment for the pathology within the case is so taken for granted as the optimum management that ethical components are all too often forgotten. (And that is at the level of decision-making and management: more fundamental needs are witnessed in the recent statement of a professor of medicine who said that he was appalled at what was done to patients in his teaching hospital for publication and promotion ("Other health workers and lay persons should also read this book, however, so that they can challenge their own assumptions of what is good and best, and understand the dilemmas which beset doctors and often make a mockery of their apparent power and authority).

Having recommended the book I must, however, issue some caveats. The first of those, which may be an advantage of the book rather than a weakness, is that much of what the authors see as an ethical prerogative seems to overlap with current GP teaching about seeing the patient in "physical, social and psychological terms" and might be thought, at first

sight, to be merely saying the same thing. What the book actually does, however, is to establish the ethical basis for what would otherwise be a pragmatic approach.

A more serious doubt stems from the authors' apparently interchangeable use of the words "ethics" and "morals" which many people may find unacceptable. I feel that we need one word to describe the principles by which we govern our own personal behaviour and which we have no right to apply to other people or use as a basis for making judgments about them, and another for the principles (which may be of course derived from the former category of principles) by which we control our professional behaviour and which we can expect of our colleagues and which we can use as a basis for making judgments of their behaviour. To put it crudely it is no concern of mine whether a colleague "sleeps around" or with whom the sleeping around takes place, but it is very much my concern if patients' safety, autonomy, dignity, and comfort are put at risk by his or her behaviour. I feel that by using the words moral and ethical in the same way the authors may provide an alibi for those who would evade the issue by claiming their professional ethics are as much their own business as their personal morals.

By using the technique of hanging each chapter on the events in one patient's life they lose the opportunity to look at one or two wider issues which I had hoped they would address. Key among these is that ethics are not immutable but do ex-

press directives laid upon the professions by the society which they serve. The obvious example is termination of pregnancy which was completely unethical until the Abortion Law Reform Act was passed in 1967 and which next day became perfectly ethical behaviour.

I suspect that the concern with patient autonomy which has now, rightly, become an ethical issue, reflects in the emergent will of society and that whereas nowadays there would be wide agreement that it is an ethical issue this would not have been so 40 or 50 years ago. This poses difficult problems (as does for instance the mismatch between Parliament which sets its face against capital punishment and the public as judged by public opinion polls which would like to see a return to capital punishment), because there may be times when professional appreciation of such issues is at variance with society's and there is no arbiter.

The chapter based on a non-accidental injury case conference actually gets into the theory of argument in a way that I felt was not deep enough to do justice to the topic but which also diminished the momentum of the book. However, these are minor criticisms of a good and useful book which forces us to examine the really important ethical issues of everyday practice.

D. H. H. Metcalfe

D. H. H. Metcalfe is professor of general practice at the University of Manchester.

Ethical codes

Ethical Problems in Psychological Research
by Heinz Schuler
Academic Press, £26.20
ISBN 0 12 631 250 8

It is asserted in this book that those scientists who are involved in research are least likely to consider the ethical implications of their work. The author hopes "to help transform this negative correlation into a positive one" for psychologists. In its present form, however, his book is unlikely to correct any imbalance between ethical awareness and research endeavour which might exist among English-speaking psychologists.

Schuler is a German psychologist who took a year from his own research in social psychology to develop this exposition, which to an English reader seems to be both laboured and poorly structured. It should be emphasized, however, that he has been badly served by his American translators, who allow Teutonic constructions to be displayed in a form which often seems to tempt the reader to translate back into the original German.

Schuler's review opens with arguments leading to the conclusion that psychological research depends on a social contract structured between researcher and "subject". This contract is continually threatened, however, by the researcher's need to withhold information or deceive if the purpose of an investigation is not to be prejudged. These observations may seem unsurprising to contemporary students of psychology, and they have a scientist as well as a moral impact. They are here, however, obscured by unnecessarily weary and obscure discussions of the history of psychology and the simple-mindedness of behaviourists (that is, experimentalists).

Nevertheless, Schuler ultimately uses his perspective to make some interesting observations on the well-known experiments by Milgram in obedience to authority - the best exemplar it seems of morally conflicting research in psychology. Milgram's work has of course been widely discussed by others and indeed seems to have played a seminal role in psychology in many different and often contradictory ways. Schuler's review of the extent to which Milgram can be thought to have broken the assumptions of the social contract with his volunteer subjects through the alleged willingness to

The reader is guided through only a few specific examples of experiments which most of us might wish had never been done, although the impact of these psychological horror stories is enhanced somewhat by the inclusion of some medical studies which have no psychological content. The focus of Schuler's concern, however, is to be found in the persistent distortion of the balance of power and influence inherent in the social interactions between researchers and subjects in psychological experiments. Schuler does not confine his concern to experimentation, for similar ethical issues are to be found in field research, action research, participant observation, and so on.

Schuler briefly considers whether these ethical issues can be adequately handled by utilitarian philosophies in which for example the possible cost to the subject of psychological research is evaluated against the potential gain in psychological knowledge. He briefly contrasts this apparently predominant stance in contemporary psychology with a deontological ethic based on a Kantian categorical imperative. This comparison is not developed as it might have been, the author turning instead to consider how psychologists have risen to what he calls the challenge of operationalizing ethical principles.

This final section is particularly disappointing. It is brought to a forceful conclusion, merely giving way to a presentation of the ethical codes for psychological researchers in a number of countries. These codes suggest that psychologists have in general risen to the challenge of operationalization with self-satisfaction and smug "professionalism". Even the so-called deontological codes of French and Swiss research psychologists balance the moral tensions of their work against their trumpeted integrity. For example, the researchers (French) psychologists are supposed to choose their field of research as best they can according to their judgment of its scientific interest, avoiding all "self-motives". Disappointingly, the "Polish" code shows no impact of an alternative political philosophy, except perhaps in its emphasis on the requirements of "scientific solidity". Only a pedant can be expected to profit from having both the 1977 and 1981 versions of the ethical standards of this American Psychological Association, both here printed in full.

Although it may be chauvinistic to say so, the ethical principles for research with human subjects developed by the British Psychological Society seem to average favourably from this compendium. They avoid the self-satisfaction and self-righteousness of being less compromised than others, they list some of the general situations which can readily

give rise to special ethical issues, and they emphasize the responsibility of research psychologists to be open, to seek the views of others, and to make considered judgments about specific studies.

In recent years psychologists have themselves become more aware of the ethical implications of their research, as well they might. Schuler's book can be taken as a further sign of this increasing self-awareness, and is certainly not without interest both ethically and scientifically. However, the opportunity to develop a penetrating and general analysis of the moral philosophy of contemporary psychology has been lost in this book, a disappointment which is emphasized by the effort of reading it in this translation.

D. E. Blackman

D. E. Blackman is professor of psychology at University College, Cardiff.

Embryonic status

Test-Tube Babies: a guide to moral questions, present techniques and future possibilities
edited by William Walters and Peter Singer
Oxford University Press, £12.50 and £5.95
ISBN 0 19 554 342 4 and 340 8

New developments in science and technology have opened up a vacuum, even if they seem to take place entirely within the sterile surroundings of a laboratory. The social context provides the characters peopling the scientific drama; the impetus for each process of discovery and the "meaning" of science itself. However, this is to talk in a merely theoretical manner of the dialectical relationship between the scientific laboratory and the social world. The state of affairs is more complex and is well illustrated by this book on the techniques and ethics of that phenomenon popularly known as "test-tube babies".

Louise Brown, the world's first test-tube baby, was born in England in July 1978 as a result of two techniques new to the field of reproductive medicine: *in vitro* fertilization (IVF) and embryo transfer (ET). The techniques were originally developed as part of the treatment available for infertile women. They raise all sorts of questions which are not medical but moral - that is, they pose dilem-

mas of choice about the varieties of human conduct, dilemmas going beyond the conventions of class decision-making.

These dilemmas fall into two groups: those concerning the objectives for which the new reproductive technologies should be used, and those concerning who should control the technology. For example, surrogate motherhood ever since Surrogate fatherhood (AID) has, of course, been accepted for some time, but the brevity of the male's contribution to gestation seems to have made this a relatively inconsequential ethical issue, compared with the parallel situation in the female.

Whether babies are "conceived" in the test-tube or not, successful pregnancy still requires a lengthy journey in the human womb. By surrogate motherhood may be identified in two ways: either by some intercourse/artificial insemination (the husband of an infertile woman, inseminating a fertile one who then hand over the baby to its biological father for rearing) or by means of IVF and ET - in which case the surrogate mother only donates one of her womb for the required period. What is the ethical difference, if any, between these two situations? Does the intrusion of a human social relationship (the act of intercourse) make for more or less of an ethical problem? What is the contribution made by the scientist in the case of IVF and ET? What are the limits of his (rarely her) rights and responsibilities?

Test-Tube Babies, in adopting a popular term for its title, acknowledges the "science fiction" aspect of the problem: visions of a world in which the social process and society of reproduction have been replaced by the cold exigencies of a scientific technique. But the book conveys the important message that this world may nearly be upon us. We need to sort out the issues for what kind of objective, how the technology and its present users settle the matter for us. In this sense, the new techniques may be regarded as simply the latest examples of the rise and dominance of medical technologies.

None of the individual contributions in the book (which is a volume edited by the Munnich University/Queen's University Medical Centre Infertility Programme directed by Professor C. Wood) addresses this issue directly. Some describe the experience of being on the receiving end of the treatments - what it is like to be an IVF mother, for example. Some go on to themes from within the ethical debate: what is informed consent, what is the status of an embryo, who owns it? Some recognize the profundity of the separation of sex and procreation, the blurring of social reproduction; childbearing, in meaning, of course, significantly touched.

A number of points of view are represented in the book, which is not only a guide to health, it is too, too, to have a record of the way in which the ethical issues of the technologies were handled in the particular medical setting - as opposed to two lists of the ethical guidelines of the Queen Victoria Medical Centre and Melbourne. It would, however, have been an improvement to have had in the book some discussion of the basic assumption here, which is that reproductive technologies should be controlled by clinicians and scientists, and that the "public" on whom they are practised are grateful recipients rather than equally responsible individuals.

Ann Oakley

Ann Oakley is a Wellcome Research Fellow at the National Institute for Research in Human Fertility, Oxford.

Routledge & Kegan Paul have published a *Dictionary of Social Welfare* compiled by Noel Timms. It is a dictionary of social welfare to provide a practical aid for readers in thinking and talking about social welfare. The dictionary is available at £29.50.

BOOKS

ECONOMICS

Of course a classic

Monetary Trends in the United States and the United Kingdom: their relation to income, prices and interest rates 1967-1975

by Milton Friedman and Anne J. Schwartz
University of Chicago Press, £33.60
ISBN 0 226 26409 2

The Framework of UK Monetary Policy
by David T. Llewellyn, et al
Heinemann Education, £14.50 and £5.95

Money Matters: a Keynesian approach to monetary economics
by Sheila C. Dow and Peter E. Earl
Martin Robertson, £17.50 and £7.50
ISBN 0 85520 484 2 and 485 0

Monetary Trends is the fourth and last in the series of works on long-term monetary statistics which began with *A Monetary History of the United States* (1963). Its main interest to UK readers will of course be that for the first time extensive use is made of UK data. In addition, we are promised more in the way of analysis: "The special task of this book is to present a statistical and theoretical analysis of the relation between the quantity of money and other key economic magnitudes over periods longer than those dominated by cyclical fluctuations."

The volume is at the same time both impressive and disappointing. The impressiveness is in the sheer volume and detail of the statistical analysis. The disappointments are more varied.

First, the theory is for the most part both familiar and somewhat dated. This is no doubt partly attributable to the book's long gestation period: many of the theoretical sections were drafted in the mid-1960s. Large sections of chapter two, "The General Theoretical Framework" are taken almost verbatim from "The Optimum Quantity of Money" (1969) and from "A Theoretical Framework" (1970). Familiar criticisms are scarcely acknowledged, let alone confronted. For example, the exogeneity of the supply of money is simply reasserted: "... changes in nominal supply have feedback effects on the variables determining the real quantity demanded". Fiscal policy? "In our view, these feedback effects may be for the most part relatively minor..." (page 32). This, of course, allows the authors to invert the demand-for-money relation to provide a nominal income relation without worrying about either identification or causality. There is an interesting explanation of why, granted the legitimacy of this inversion, there should be long lags in the impact of monetary changes on nominal income. The demand for money depends (negatively) on the rates of return on both financial and physical assets. The latter is proxied by the rate of change of nominal income. Consequently, the level of nominal income depends positively on its own rate of change. Once the proxy is made an adaptive-expectations function of changes in nominal income, the (potentially long) lag appears.

A second major disappointment is more technical. The analysis is based on geometrical averages of annual data for "cyclical phases" (that is, years whose length averaged 2.0 years for the US and 2.8 years for the UK). Rates of change were computed by fitting a straight line to the logarithms of three successive phase averages. This amounts to very drastic prior filtering of the data - yet there is extensive econometric evidence that filtering is liable to produce very misleading results. This potential criticism is, again, not acknowledged or confronted.

The UK data themselves, which cover the century from the mid-1870s, will be of interest to British readers. The authors inevitably rely heavily on the work of Shappard (for

monetary series) and Feinstein (for price and output series). It would be impossible to summarize the main empirical findings at all adequately, but their not unexpected favour can be inferred from one quotation: "Our data are consistent with the theoretical expectation that the cumulative effect of a 1 percentage point change in monetary growth will be a 1 percentage point of change in the same direction in the rate of nominal income growth."

This volume will not, I think, convert any sceptics about Friedman's approach to monetary economics. It will, of course, become a classic.

The rationale, conduct and institutions of monetary policy changed almost beyond recognition during the 1970s. *The Framework of Monetary Policy in the UK* is a valuable, comprehensive survey of these developments. An admirably clear and concise introduction by David Llewellyn is followed by full accounts of the money supply process and the relevant UK institutions (also by Llewellyn). These two chapters make Friedman's crucial assumption of a wholly exogenous money supply "spigot" look very shaky indeed. The next chapter (Llewellyn again) is a painstaking exploration of the role of external transactions. G. J. Dennis provides a succinct, if inconclusive, account of the changing rationale of monetary policy. M. J. B. Hall follows up Llewellyn's earlier chapters by looking systematically at the various instruments of monetary policy and also contributes a broadly sceptical survey of monetary targets.

The overall approach is avowedly institutional rather than theoretical. In one sense this is greatly to be welcomed as a corrective to the naïveté of much writing about the supply of money and its control. Yet in many cases, one has the feeling at the close of the chapter that the authors are on the verge of drawing out the theoretical implications but has forced himself not to do so. This self-denial is a pity (especially for students) since such drawings-out would have been authoritative and well-documented (the bibliographies are excellent). Nevertheless, this is a book greatly to be recommended to all those with an interest in monetary theory or in economic policy.

Money Matters is unambiguously an undergraduate textbook. Its scope is widely over-ambitious for its 250-odd pages. It attempts to cover banking, "intermediation", wealth effects, crowding out, financial instability, monetarism and Keynesian macroeconomic and monetary theory, monetary policy, the monetary approach to the balance of payments, and more besides. There are also "case studies" - the Scottish banking system, "five cases of financial failure", OPEC, and others. The superficiality which results was inevitable. Worse than all, however, the book could perhaps be suggested to students as light pre-exam reading. But the authors (from the University of Stirling) have a methodological approach of such an extreme kind that one would hesitate to expose students to it without careful supervision. This pervades the book, but it is most explicit in a chapter on "School of Thought in Monetary Economics". Having, quite properly, pointed out that empirical evidence may not be conclusive, they then conclude that: "The implication is that theories can only be accepted on faith..." Which theoretical approach an economist will believe to be best will depend on his academic upbringing, the circles within which she moves and the country whose affairs claim most of her attention, as well as her (habitual) predispositions" (pages 177-8). And later (page 197): "We shall not concern ourselves overmuch with empirical findings which appear to support Monetarist theories." To draw attention to ideological and political elements in economic theory is one thing; to suggest that the choice of theory is quite arbitrary is another. One is not surprised to find the authors freely admitting to "Keynesian biases" (page 166, my italics).

With scepticism like this, neither monetarists nor econometricians really need friends.

M. J. C. Surrey

M. J. C. Surrey is professor of economics at the University of Leeds.

Fighting the Polish disease

Crisis in the East European Economy: the spread of the Polish disease

edited by Jan Drewnowski
Croom Helm, £11.95
ISBN 0 7099 0826 1

The Socialist Corporation and Technocratic Power: the Polish United Workers' Party, industrial organization and workforce control, 1958-80
by Jean Woodall
Cambridge University Press, £24.00
ISBN 0 521 24269 X

"There is a spectre haunting Eastern Europe: the spectre of zero growth". Thus Professor Wiles bewitchingly introduces the main theme of the useful symposium edited by Professor Drewnowski: in the past ten years economic growth throughout Eastern Europe, including the Soviet Union, while not usually as low as zero, has certainly greatly declined.

Against a background of profound western economic crisis, these developments may not seem disastrous. After all, many advanced western economies have suffered an absolute decline in their national income in the past five years. The East European economies have maintained full employment, and inflation has been much lower than in the West. But a substantial and continuing rate of growth has always been the most obvious advantage of the Communist economies. With steady growth, it has been much easier to cope with inefficiency and waste resulting from the high degree of centralization. Lower growth has rapidly resulted in a crisis of expectations. Why has it occurred? Can the trend be reversed?

In some East European countries, part of the decline in growth can plausibly be attributed to the impact of western economic crisis. In Poland, as Professor Nutt clearly shows, Giermek's strategy of reliance on foreign trade and capital imports to finance the economy was disrupted by the oil crisis, the huge increase in western interest rates, and the failure to achieve adequate exports to the west. Nutt argues, however, that Poland's vast programme of capital accumulation in the 1970s was in any case overambitious; the western crisis turned a risky policy into a disaster.

In the Soviet Union the impact of the western crisis was much smaller; and the decline is much more difficult to explain. The annual growth of national income was 6 per cent in 1951-5, and 3.7 per cent in 1971-5, according to CIA estimates, and was substantially higher according to Soviet official statistics; it was certainly much higher than the growth in population. But by 1979-81, according to both Wiles and Ellman, it had fallen to 1 per cent a year, roughly equal to the growth in population.

This decline was certainly not entirely due to the growing inefficiency of the system. Exceptionally bad weather from 1979 onwards resulted in three (now four) bad harvests in a row. The real costs of the immense Soviet effort to catch up with United States military technology in the 1970s must have been very high (Professor Wiles discusses this too lightly), and since 1980 defence expenditure has been increased by the costs of the invasion of Afghanistan. The capital and current costs of the exploitation of natural resources have also risen very considerably with the shift to remoter oil fields and coal mines.

It is impossible to measure precisely how far such factors exogenous to the economic system have been responsible for the downturn. The authors of the Drewnowski symposium are strongly convinced that they do not provide a complete explanation. According to Professor Drewnowski, secrecy, suppression of dissent, and other political and social factors have resulted in a cumulative "rot in the tissue" of the system. Professor

Wiles similarly suggests that a cumulative discontent with broken promises, a "general spiritual malaise", may have seriously affected economic performance. Professor Nove is somewhat less sombre in his diagnosis, but certainly agrees with Drewnowski and Wiles that fundamental political and economic reforms are required. While Nove believes that substantial reforms are unlikely in view of the worsening international climate, Dr Gomulka anticipates that it may be possible to secure "comparative freedom in the economic domain" while maintaining or even intensifying political and social controls.

It will certainly not be easy to achieve major economic reforms without political and social reforms. The quest for economic efficiency may actually uncover and exacerbate social discontent. The Polish crisis of 1980 dramatically exemplified this danger. Like the 1970 Polish crisis, it was triggered off by the decision (obviously sensible on narrowly economic grounds) to raise meat prices so as to get rid of surplus purchasing power.

Dr Woodall's perceptive study of Polish industrial organization reveals another strand in the story. With the formation of large industrial corporations in the 1970s the authorities sought to enhance industrial efficiency, but at the cost of excluding any possibility of workers' participation in management. According to Dr Woodall, highly-educated worker technicians, often holding the post of foreman, frustrated by the industrial system, were major organizers of the strike committees of 1980 which in turn led to the formation of *Solidarność*. In Poland, if not elsewhere in Eastern Europe, the attempt to exorcise the spectre of zero growth in an adventurously called forth and materialized the demon of working-class revolt.

R. W. Davies

R. W. Davies is professor of Soviet economic studies at the Centre for Russian and East European Studies of the University of Birmingham.

Inside the Black Box

Technology and Economics
NATHAN ROSENBERG

An examination of the mechanism of technical change and the process by which different characteristics are manifested during the life cycle of a particular technology. The author clearly shows how specific features of individual technologies have shaped a number of variables such as the rate of productivity improvement, the speed of technology transfer and the influence of government policies.

Hard covers £18.50 net
Paperback £7.95 net

Quantitative Economic Policies and Interactive Planning

A Reconstitution of the Theory of Economic Policy
ANDREW HUGHES HALLETT and HEDLEY REES

An integrated account of the methods of quantitative economic planning, this book provides techniques for making rational policy choices which allow for the variations in individual preferences, expectations, or information sets, found in economic systems.

Hard covers £30.00 net
Paperback £17.50 net

Mathematics for Economists

An Integrated Approach
E. ROY WEINTRAUB

Professor Weintraub believes that a student's intuition should be involved in the study of mathematical techniques in economics - an intuition which develops not so much from solving problems as from visualizing them. In this textbook the clarity of exposition and his organization of the topics encourages the student to develop a geometric intuition of the mathematical results. Hard covers £15.00 net
Paperback £8.95 net

New in paperback

The Years of High Theory
Invention and Tradition in Economic Thought
1926-1939

G. L. S. SHACKLE

In this classic book Professor Shackle provides a study of the precise nature, structure, presuppositions, language, and inter-relationships of the theories which were formulated in the years from 1926 to 1939 - unparalleled in the whole history of economics except perhaps by the years of the Physiocrats and Adam Smith. A new foreword is included in this edition.

Paperback £8.95 net

Multinational Enterprise and Economic Analysis

RICHARD E. CAVES

A synthesis of what economic analysis has to say about multinational enterprises. Professor Caves concludes by comparing the welfare evaluation of multinational enterprises that flows from economic analysis to the policy postures frequently taken by both source-country and host-country governments, and argues that these policies often reflect objectives other than the economic welfare of the citizens.

Cambridge Surveys of Economic Literature
Hard covers £20.00 net
Paperback £7.50 net

Measuring Economic Welfare: New Methods

GEORGE MCKENZIE

Various means of evaluating economic policies and projects have been proposed in the past, but none is realistically capable of correctly ordering the various alternatives under consideration. This book argues for the abandonment of the traditional approach, to be replaced by the "money-metric" as the comparison of welfare economics.

Hard covers £17.50 net
Paperback £7.50 net

The Timing of Economic Activities

GORDON C. WINSTON

Economic processes are conventionally analysed from one point in time to another over a series of units - days, weeks or years. This study introduces a "time-specific" analysis of economic processes, which in contrast focuses on the temporal character of events - their timing, duration and sequence - utilising the information that is lost by the microscopic time perspective of standard economic theory.

Hard covers £22.50 net
Paperback £8.50 net

New in paperback

Structural Change and Economic Growth
A Theoretical Essay on the Dynamics of the Wealth of Nations

LUIGI L. PASINETTI

One of the most impressive products to date to have come out of this so-called Anglo-Italian school. It is also, perhaps, the finest achievement in the Ricardian tradition since Brauer's edition of Ricardo's *Works* and Brauer's (1969) treatise.

Contributions to Political Economy
Paperback £8.50 net

CAMBRIDGE UNIVERSITY PRESS

Economics Books

Applied Economics
EDMUND SEDDON & J.D.S. APPLETON
For all students of applied economics, this HANDBOOK analyses the major problems which confront the British economy today and tests the validity of theoretical solutions to these problems against the results achieved.
0177 7 £4.50

Basic Economics
S.J. THIRKETTLE
HANDBOOK giving a detailed treatment of the principles of economics. Ideal for students preparing for the intermediate or foundation stages of professional examinations in banking, accounting and allied fields, or as a self-contained revision course.
0278 7 £2.25

A Dictionary of Economics and Commerce
J.L. HANSON
Clear and succinct definitions of terms relating to the principles of economic theory, applied economics and commerce.
0424 0 £4.95

Hanson's Introduction to Applied Economics
J.L. HANSON, revised by JOHN BEARDSHAW
Primarily intended for students studying applied economics for the BEC Higher National Certificate or Diploma in Business Studies or the Diploma in Management Studies.
0663 3 £7.25

Labour Economics
J.D.S. APPLETON
Extensively rewritten third edition of this HANDBOOK, taking account of the possibility of large-scale long-term unemployment and its implications.
2703 8 £4.95

Teachers and lecturers may send for inspection copies. For these, or for FREE Business Studies catalogue, write to Dept. THES 26F, Macdonald & Evans, FREEPOST, Plymouth PL5 2BR (no postage stamp needed if posted in the UK).

Macdonald and Evans

Why Economists Disagree

The Political Economy of Economics

Ken Cole, John Cameron and Chris Edwards

Many people call themselves 'economists' and thus apparently accept some shared identity. It is obvious that there are major areas of disagreement between them and while they may agree on what they disagree, they rarely agree on why. Students are aware of this situation, especially as it concerns current political and economic debates, and until now there has been no satisfactory explanation of it in standard courses and textbooks.

Cole, Cameron and Edwards identify three schools of thought: selective preference theory, cost-of-production theory and abstract labour theory. Why Economists Disagree provides a rigorous, non-mathematical analysis of the theory and politics of each school and brings the subject alive by showing the links between economic theory and political practice.

Paper 0 582 29547 7 £5.95 net

For inspection copies please contact Linda Coleman, Longman House, Burnt Mill, Harlow, Essex CM20 3JE, telephone 0278 28721 ext 345.

Longman

THE SPECIAL BOOK NUMBERS FOR MARCH

MARCH 4th - EUROPEAN STUDIES

MARCH 11th - SOCIOLOGY

MARCH 18th - MATHS AND PHYSICS

MARCH 25th - HISTORY

BOOKS

ECONOMICS

Producing less

The Rise and Decline of Nations
by Mancur Olson
Yale University Press, £8.95
ISBN 0 300 02307 3
International Industrial Productivity by A. D. Smith, D. Hitchcock and S. W. Davies
Cambridge University Press, £13.50
ISBN 0 521 24901 5
Slower Growth in the Western World
edited by R. C. O. Matthews
Heinemann Educational, £14.50 and £6.50
ISBN 0 435 84515 2 and 84516 0

These three books collectively aim to shed more light on the fascinating questions of why levels of output per head differ so widely between industrial countries and why rates of growth of output per head vary between countries and over time. Individually they are concerned with different aspects of the questions; each adopts a rather different approach.

The most ambitious and original work is that of Mancur Olson who, drawing upon his *Logic of Collective Action* attempts to explain a wide variety of growth experience. The first third of the book sets out the analytical framework which is then put through a series of tests.

Olson's central argument is as follows. Modern societies consist of a large number and variety of special interest groups who supply collective goods to their members. As with the provision of all collective goods there is a free rider problem so these organizations usually offer selective incentives which may be positive (benefits such as legal protection) or negative (exclusion, disapproval). Small interest groups will often have the greater power, or incentive to further the interests of their members, for two reasons. First, because in small groups the proportionate gain to the action of any one individual is greatest. Second, because a small group can gain by devoting resources to increasing their share of total output. Large 'encompassing' organizations, on the other hand, can only gain by measures which increase total output. All such organizations tend to make decisions slowly. Finally, the more stable and long established a society is the more likely it is to have a well developed system of special interest groups which will slow down the rate of growth.

Thus, to take an obvious example, the slow postwar growth of Britain relative to Japan and Germany may be attributable to the long-run social and political stability of the former whereas in the latter two countries many institutions started anew after the war (51 per cent of 'associations' existing in Britain in 1971 were founded before 1939; in Germany the proportion was 24 per cent; in Japan 19 per cent). The argument implies that growth will slow down in the latter countries as stability promotes the growth of interest groups, although this effect may be modified by the fact that many organizations in those countries are 'encompassing'.

The analysis is applied to a wide range of other cases and holds up remarkably well. Resource-rich Australia and New Zealand grow slowly because 'oligarchs' and firms have obtained high levels of protection (which further promotes self-interest) for manufacturing (the sunbelt of the United States grew faster than the older established manufacturing areas of the north-east and so on). A final lengthy chapter is devoted to inflation and unemployment. Recent macroeconomic work has to some extent confirmed the proposition that wage and price stickiness may lead to market non-clearing and Olson's theory clearly predicts this. For example, it may be in the interest of unions to resist wage adjustments and, more generally, the slow nature of decision-making in special interest groups slows down price and wage changes.

Olson has written a stimulating book to put alongside more traditional explanations of growth. As he points out, however, the literature on the sources of growth does not yield the ultimate source: if investment is the cause, it does not tell us why the investment did, or did not, occur.

Smith, Hitchcock and Davies construct measures of the level of labour productivity in six non-service sectors of the British, American and German economies in the years 1968-77. Across all six sectors in 1977 productivity in the United States was about 2.7 times that in Britain, and in Germany it was about 1.4 times greater than in Britain. They find that, relative to these averages, agriculture and transport are good performers in Britain and extractive industries and public utilities do badly; relative performance in manufacturing is about the same as the average. A series of possible explanations of these productivity differences are tested in a simple statistical way and the only clear result to emerge is that, not surprisingly, low labour productivity is associated with low capital intensity. About one half of the book is devoted to explaining the measurement of sectoral productivity. Its main value will be to those wishing to use the resulting estimates.

Slower Growth in the Western World contains eight papers (with comments) presented to a conference held in mid-1982 together with a superb, succinct, summary by the editor. Comparing labour productivity growth in the period 1973-79 with that in 1961-73 all industrial countries experienced a slow-down of the order of 5 percentage

points a year in Japan and of about 1.2 percentage points in Europe and the United States. The question addressed by most papers is: why? Most of the authors attribute, in varying degrees, the slow-down to demand deficiencies. Slow growth of demand reduces productivity growth in the short run, as labour input adjusts more slowly than output and the benefits associated with the Verdoorn effect. Deficient demand may also have made it more difficult to bring about the required structural changes following the increase in the price of oil, and other materials, in 1973.

A theme running through several papers, and one that is increasingly emerging as a consensus view, is that the 1950s and 1960s were years of a long boom due to special circumstances unlikely to be repeated in the foreseeable future. Sargent argues that one of these was a fall in the real cost of capital that opened up profitable investment opportunities and temporarily speeded up the rate of capital accumulation. Once complete adjustment occurred the equilibrium growth path returned to its previous level. This is an interesting set of papers and if some have a rather hurried and unfinished air about them, there is enough of merit to recommend the book, particularly in view of its commendably quick production.

Keith Norris

Keith Norris is reader in economics at Brunel University.

Who was first?

Anticipations of the General Theory?
and other essays on Keynes
by Don Patinkin
Blackwell, £15.00
ISBN 0 631 13156 6

Less than half of this volume is devoted to anticipations of Keynes's *General Theory of Employment, Interest and Money*. Four of the nine chapters are reproductions of previously published articles with some revisions and additions. The intention is that these self-contained, earlier writings by Patinkin on Keynesianism will provide background material for the original matter in part one, but the result is a volume which lacks cohesion. The first part, which has not appeared in print elsewhere and forms the core of the book, is based on a series of public lectures given at the University of Chicago in 1978 and deals with the simultaneous discovery of the *General Theory*.

Persistent depression and unemployment were common to all countries in the western world in the 1930s and since economists as a social science in several of these countries were not basedly different at the time. It would seem reasonable to expect a multiple 'discovery' of Keynes's *General Theory*. Patinkin concerns himself with the possibility of independent discovery in different countries and examines the claims that have been made on behalf of the Stockholm School and the Polish economist Michal Kalecki.

Patinkin starts by identifying the major innovative feature and central message of the *General Theory*. He emphasizes that the primary concern of the *General Theory* is theory rather than policy: the primary concern of the theory is output and employment, and that the primary concern of its theory of output is the explanation of equilibrium in an economy at less than full employment. He sees the theory of effective demand as the central message which explained the unemployment equilibrium of the 1930s. Not only would the level of effective demand determine the level of output and employment in the economy but any decline in output would itself generate feedback effects which would ultimately eliminate the excess of supply over demand. Patinkin emphasizes that changes in output are the distinctive feature of the *General Theory*.

A scientist of a properly said to Patinkin, only if it is part of his central message, is the central mes-

sage must be fully integrated into the scholar's conceptual framework and must be distinguished from the random component of his thinking. It must be announced early in the work and repeated regularly throughout. In his assessment of the writings of Kalecki and the Stockholm school, Patinkin shows that their works do not contain the central message of the *General Theory*. His contention is that Kalecki is concerned with analysis not of output but of investment; not with a state of continued low-level employment but with forces that generate cycles of investment and output, and with the feedback mechanism that equilibrates supply and demand via declines in output.

In analysing the relation between the theoretical writings of the Swedish economists and the *General Theory*, Patinkin explores the work of Wicksell, Lindahl, Myrdal, Ohlin and Lundberg. His findings, which he writes contain no recognition of what he has singled out as the novel central message, namely, the equilibrating role of changes in output. Wicksell, Lindahl and Ohlin are shown to have been primarily concerned with prices, not output.

Patinkin's assertion that the *General Theory* cannot be considered an instance of multiple discovery is challenged by many economists. Klein and Robinson claim that Kalecki undoubtedly anticipated the *General Theory* in an independent discovery while Stolier claims that both Myrdal and Ohlin anticipated the *General Theory* by different means. These differences of opinion can be partly explained by different definitions of Keynes's central message. Klein and Robinson fail to incorporate the equilibrating role of changes in output within their definition while it is given priority by Patinkin.

However, another important reason for these differences of opinion concerns the distinction between the logical and chronological. Klein's contention about Kalecki is based on his claim that a system of equilibrium equivalent to the *General Theory* was constructed from Kalecki's writings. Patinkin's reply is that does not mean that Kalecki himself perceived his system at the time. In the end, however, acceptance of Patinkin's conclusion that there was no multiple discovery of the *General Theory* requires acceptance of his piece and a subjective definition of the innovative feature of this theory.

James F. Bradley
James F. Bradley is lecturer in economics at Queen's University, Belfast.

BOOKS

ECONOMICS

Question marks

The Renaissance of the Scottish Economy?
by Charlotte Lythe and Madhav Majumdar
Allen & Unwin, £8.95
ISBN 0 04 339032 3

Devolution, like the poor, is always with us. Despite the defeat of the devolutionists in the 1979 referendum - much more emphatic in Wales, it has to be admitted, than in Scotland - two of the major political parties (treating the Alliance as one and, more questionably perhaps, as major) are once again approaching an election with a Scottish Assembly as a plank in their platform. In so far as political debate can be influenced by rational argument, therefore, the timing of the publication of this study of the political and economic structure of contemporary Scotland is well chosen.

The question-mark in the book's title is not mere affectation. It is meant to indicate the doubt which must legitimately be expressed concerning both elements in it: on the one hand, the existence, or otherwise, of a Scottish economy in the sense of a system which could be shaped and manipulated by internal (ie Scots) policies, independently of the English; and, on the other, the possibility, or otherwise, of a return to the relative affluence which Scotland in comparison with England appears to have enjoyed at the peak of the industrial revolution in the late nineteenth century. The advocates of devolution, and a fortiori of home rule, regard elements as self-evident and appear genuinely to believe that a group of people, in Edinburgh (or Cardiff or wherever) equipped with an assembly and the appropriate battalions of civil servants can legislate free haggis into existence. The message of this book is that both elements are, for all practical purposes, illusion.

This is not because the authors are (like some of us) cynical concerning the ability of political mechanisms or civil servants to increase the wealth-creating powers of society by the minutest fraction. Indeed, in its opening and concluding descriptive chapters the book suggests that on occasion the formidable battery of administrators which the Scots have endured for many a long year may have marginally improved the lot of their fellow-men. No positive evidence exists to support this proposition, of course; it is simply that it is not impossible that it might have been so, and the authors charitably give the administrators the benefit of the doubt.

But it is the four intervening chapters which do the damage. These set out in exhaustive, some might say exhausting - detail the facts, in so far as they can be discerned, of Scotland's economic structure and performance over the period 1954-79. Non-economists are likely to find these chapters hard going; in them the reader is confronted, with 35 statistical tables and 13 graphs, most of them of roughly the consistency and digestibility of a railway time-table. The evidence is subjected to careful and ingenious analysis, although economists are likely to raise a few eyebrows at some of the methodologies.

Nevertheless, if demonstrators beyond dispute the open nature of Scotland's economic structure, the dominating influence of the UK levels of prices, output and employment and the exceedingly close constraints within which any conceivable devolved government would inescapably be confined.

In a particularly valuable section the authors show that this is true not only of a devolved government but of so-called regional policy as a whole. Much recent work on British policy having a regional dimension has foolishly proceeded on the principle of *post hoc ergo propter hoc*, arguing that because the relative

position of the regions exhibited some improvement during the 1960s when regional policy was 'active' the former was therefore caused by the latter. This book shows that the dominant influence behind both was the relatively high growth rate of the UK as a whole: our so-called regional policy has 'worked', if it at all, only when it was least necessary.

All this is well said. Although the volume is undoubtedly the most comprehensive and well-documented study to date of the economic structure of Scotland, I doubt if the political advocates of a Scottish Assembly will give it the study it merits. Certainly they will not like it; but this is only because they wrongly believe that the foundation of the case they are seeking to make is substantially economic, whereas in reality it is wholly political.

E. T. Nevin

E. T. Nevin is professor of economics in University College, Swansea.

Reliving rivalry

The Oxford Economists in the Late Nineteenth Century
by Alan Kadish
Oxford University Press, £19.50
ISBN 0 19 521886 9

Alan Kadish has had the bright idea of identifying the members of the Oxford Economic Society in the years 1886 to 1891 and contrasting their views of economics with those of their Cambridge contemporaries. Of the 27 listed, I am acquainted with the work of only six (William Ashley, Sidney Ball, Edwin Cannan, L.L. Price, L.T. Hobhouse and Llewellyn Smith). I have, too, heard of W.A. S. Hewins, the first director of the London School of Economics, one of whose qualifications, according to Sidney Webb, was that 'he was not a Cambridge orthodox person' - which meant that he was not Alfred Marshall nor one of his disciples.

Dr Kadish emphasizes the contrast in ethos of the two universities. In retrospect, the group which this study has dealt with offers an example of lateral scientific development expressed organizationally by the reorganization of the boundaries of political economy as an academic discipline. In its lifetime the group of Oxford economists was regarded as a school of thought, in confrontation with the group referred to as the Marshalls.

With the exception of Cannan, the Oxford crowd were short of funds and came from working-class or impoverished middle-class families that were put under severe financial strain by the expense of their education. (Might this have accounted for their interest in economics and their belief in its importance?) They also shared a strong religious sentiment combined with radical liberalism. In the 1880s, this found expression in the Extension Lectures, that had a special appeal for Oxford's young economists, because they provided an opportunity to teach political economy and economic history, 'as well as offering the challenge of realizing Toynbee's impassioned promise to England's working class. Toynbee had died in his thirty-first year, which imparted a special poignancy to his impetuous service.'

There was, then, an evident conflict between Oxford's favoured political economy that would form part of a mission for the upliftment of mankind, and the positive economics of Cambridge whose laws, in Marshall's words, 'are statements of tendencies within which any conceivable devolved government would inescapably be confined.'

In a particularly valuable section the authors show that this is true not only of a devolved government but of so-called regional policy as a whole. Much recent work on British policy having a regional dimension has foolishly proceeded on the principle of *post hoc ergo propter hoc*, arguing that because the relative

ford and the *Economic Journal* in Cambridge. Marshall had been working indefatigably for the liberation of economics from its dependence on history or statistics, and at the end of 1890, the British Economic Association was formed. According to Marshall's circular, 'the Association, by the way of the *Journal* would serve 'the advancement of economic knowledge' and through it a central cure of economic science would develop'. Marshall tried to prevent the launching of the *Economic Review*; having failed, he tried to persuade its sponsors to change its name to 'The Journal of Social Reform'. Oxford believed that Marshall wished to avoid competition (a strange motive to attribute to an orthodox economist); what he really sought was the projection of the image of a unified science. And his fears were confirmed: the first issue of the *Review* clearly rejected the positive notion of economics, advocating that a sharp line could not be drawn between the economic moralist and the scientific economist: the one must have clear knowledge of the facts, the other of the morals.

Despite these lively demonstrations of independence, Oxford economists languished while Cambridge economics advanced, its products filling a growing number of teaching posts in other universities. But Marshall did not enjoy the wholehearted support of his Cambridge contemporaries. William Cunningham, in particular, took the opportunity of his presidency of Section F in 1891 to compare the newly-published economic journals, and there clearly demonstrated the old differences between the two universities.

The intense interest which Oxford has always shown in the study of mind and of conduct has put her practically in touch with many sides of actual life. . . . But in Cambridge we are so engrossed in the study of things that we have no time to spare for trying to know ourselves.

So man was regarded 'as if he were a kind of thing' and the same methods applied to him as to physical phenomena. Herbert Foxwell's views, too, diverged from Marshall's. Both Cunningham and Foxwell moved to the London School of Economics, the one via King's, the other University College.

How is one to account for Marshall's triumph? He achieved, or almost achieved, for economics what the economists' movement has attempted for religion, by accommodating in his work a great range of mutually-conflicting ideas, sufficient removed from reality for the conflict to be obscured. Another reason for his success, perhaps, stems from his own position as the leader of the movement: as Dr Kadish remarks, one of the major problems facing the dissenters' camp, apart from the lack of organizational base, was lack of leadership. There was no figure of unquestioned professional authority in their camp who could bring unity and cohesion to their arguments and at the same time co-ordinate the struggle over academic recognition and the establishment of university posts.

The struggle was a continuation of that waged so forcefully in earlier years by Thomas Cliffe Leslie against the 'a priori' deductive method' but the 'historians' too seem to have been chasing shadows. Historical records could not provide the sort of data required for understanding economic activities; it was knowledge of the present that was required, and that was available if, and only if, the right research techniques were employed. These bright men had never left their universities and were innocent of experience of the business world; they were as Bagehot remarked: like 'anatomists who had never dissected, astronomers who had never seen the stars'.

Dr Kadish has given an impressive demonstration of the historical craft. By the immense patience of his search he has re-created the society of the 1880s and 1890s, in which economists assumed its modern form: so that one can relive the controversies of those days, and discover their curious resemblance to those of today.

Guy Routh

Dr Routh's forthcoming book is 'Economics: an alternative text'.

Poverty and Famines

An Essay on Entitlement and Deprivation
Amartya Sen

'A book that embodies the best tradition of social science. It is empirical and rational, yet neither virtue is pushed to the point where human beings are forgotten.' *Economist*. 'The book gives weight and substance to the view . . . that human institutions, in particular capitalist institutions, rather than nature or the growth of population, are responsible for famine and starvation.' *Teresa Heytar in New Society*. New in paperback £4.95

The European Economy

Growth and Crisis
Edited by Andras Boltho

This book is concerned with the economic development of Western Europe from the early 1950s to the late 1970s. It presents a comparative survey of trends in a number of areas, surveys some aspects of economic policy-making, and looks at the experience of five major European countries (France, Germany, Italy, the UK and Spain) and at that of two regions - the Banat and Scandinavia. £25 paperback £9.95

Phases of Capitalist Development

Angus Maddison

This study is a comparative analysis of the growth performance and cyclical experience of 16 advanced capitalist countries since 1820 (Western Europe, Japan, USA, Canada, and Australia). It illuminates the present economic problems and policy dilemmas of these countries by providing historical and comparative perspectives. £15 paperback £5.95

Palampur

The Economy of an Indian Village
C. J. Bliss and N. H. Stern

This study is an ambitious and systematic attempt to put to the test theories of underdevelopment and of the motive end behaviour of poor farmers in an Indian village. As well as reporting on the village, its population and institutions, the authors include a review of the development models on which they have drawn, modifying them where appropriate. £15

Oxford University Press

Basil Blackwell

The Economist as Preacher

GEORGE STIGLER

In these witty and provocative essays, the winner of the 1982 Nobel Prize for Economic Sciences and one of the world's foremost historians of economic thought has fresh and sensible things to say about the relationship between economics and ethics, the way the political environment is reflected in this highly mathematical social science. 268 pages, £15.00 (0 631 13235 X)

The Economics of Supply and Demand

LAWRENCE KLEIN

In this book, the 1980 Nobel Prize-winner, one of the leaders of modern macroeconomic modelling, makes a compelling case for the integration of supply and demand in economic analysis and policy. (May) 176 pages, £12.50 (0 631 13155 8)

Anticipations of the General Theory?

DON PATINKIN

This is the story of the circumstances that made the *General Theory* possible. Was it discovered simultaneously by several economists? What was the precise nature of the discoveries which led up to it? Why did they occur when and where they did? This major historical investigation sheds new light on a significant development. 308 pages, £17.00 (0 631 13156 6)

Monetarist, Keynesian and New Classical Economics

JEROME L. STEIN

Where once Keynesian theory reigned supreme, three competing schools now co-exist, each offering very different explanations for inflation, unemployment and the decline in growth. In this important new book, a well-known economist examines the hypotheses of each, using a general macrodynamic model. The results are startling and sure to stimulate further debate. 238 pages, £15.00 (0 631 12908 1)

New in paperback

The Political Economy of Taxation

Edited by ALAN PEACOCK and FRANCESCO FORTE

The book deserves a wide readership. *Times Higher Education Supplement* 224 pages, paperback £6.50 (0 631 13218 X)

The Politics and Philosophy of Economics

T.W. HUTCHISON

Admirable lucidity and skill. These are essays worth owning and returning to. *Times Literary Supplement* 320 pages, paperback £7.50 (0 631 13217 1)

Basil Blackwell Publisher, 108 Cowley Road, Oxford OX4 1JF

BOOKS

ECONOMICS

Bigger business

The Political Economy of Big Business
by M. A. Utton
Martin Robertson, £16.50
ISBN 0 85520 409 5

The power of large trade unions and large corporations is well known. Yet the extent of concentration of industry is less widely appreciated. Today, rather more than 40 per cent of manufacturing output is in the hands of a mere 100 giant companies, representing far fewer than 1 per cent of the total.

Dr Utton is concerned primarily with the economic but also the political implications of this concentration. Drawing heavily on the work of Professor S. J. Prais, he documents the growth of concentration, which almost doubled in the twenty years after 1950, and considers briefly its likely causes. The main interest in his book, however, relates to the

parts concerning the economic effects of concentration and the policy alternatives that could be used in dealing with it.

No one should blame the author for his cautious answers to the prior question of whether increasing concentration has been, on balance, harmful or beneficial. The evidence he ably and intelligibly recites is conflicting. Both on a priori and empirical grounds there is much to be said on both sides of the balance sheet. Economic theory predicts that profit-maximizing monopolists cause welfare losses. At the same time the existence of economies of scale implies that large firms may potentially be the most efficient, though businesses sheltered from the forces of competition may not try to minimize costs. There are also Galbraithian type arguments about the "manipulation" of consumers. Marxist contentions of the "alienation" of the working class, worries over pollution, large profits and "power" in some indefinable but none the less frightening sense. These issues are all examined and, so far as possible, tested against available evidence which is, only too often, thin and capable of more than one interpretation.

Dr Utton's conclusion is a middle-of-the-road fair-minded one. He clearly does not believe in the horror stories of wickedness. Yet he is worried over many of the consequences of increasing concentration, not least because of its trend. "Left to itself past experience suggests that the (corporate) sector would come under the control of fewer and fewer boards of management which eventually would be prepared to see operate free of direct political control" (page 221).

The most stimulating part of the book is where the author considers policies to deal with the problems. Here he chooses a much broader approach than is customary, adopting a four-fold classification: anti-trust and related policies (subsidies for small businesses for example); social responsibility, involving "cooperation" between government and business; government and labour in policy formation; and disengagement by the state. Favoured by those of the Austrian and Chicago schools who still believe firmly in the strength of competitive forces; and solutions of "the left", touching on worker participation and central planning.

Utton picks out what he regards as the best from each category, though he has little time for the "disengagers". It is hardly a surprise when, in the end, he comes down in favour of trying to better the market system. His preferred set of measures includes a much stronger competition policy, compulsory patent licensing, more information in company accounts about profits, sales, employment, and so on (about which there are currently fewer details than a generation ago). The stronger competition policy could be very interesting in so far as Utton proposes, *inter alia*, that offences be made the subject of criminal as well as civil proceedings. In the USA in a recent year, 29 persons were sent to prison for a total of 2321 days for anti-trust offences.

The proposed package will appeal most to those who wish to retain a substantial private competitive sector in our economy, though they may not buy everything in it. The great value of this book is that it stimulates thinking about the major crisis that the capitalist system will have to face if and when the current depression is over. It is a pity that it is available only in paperback. I hope a cheaper paperback will follow for it deserves a wide readership.

Colin Harbury

Colin Harbury is professor of economics at The City University.

Opinion and reality

P. T. Bauer's *Equality, the Third World and Economic Delusion* deals with what the author calls "the disconcerting distance between accepted opinion and evident reality in major areas of public economic discourse since the Second World War". It was first published in 1981. It is now issued as a paperback by Methuen at £5.95.

HUTCHINSON

The Degradation of Work?

Skill, deskilling and the labour process
Edited by Stephen Wood

An important contribution to the post-Beveridge debate, reforming and specifying the limits of crude deskilling thesis. Industrial Relations Journal

£6.95 paper 09 145401 8 238pp

The Evolution of the International Monetary System 1945-81

2nd edition
Brian Tew

Professor Tew's classic text-portray the international monetary arrangements operated by the central banks and treasuries of the non-communist countries since the war. The Times Educational Supplement

£5.95 paper 09 145911 7 250pp

Introduction to Political Economy

E. J. Mishan

Professor Mishan has succeeded in making appetizing and easy to digest what is often an unpalatable and hard subject for the beginner. The Times Higher Education Supplement

£15.00 cased 09 145390 9 280pp

£5.50 paper 09 145391 7 250pp

Reflections on the World Economic Crisis

Andre Gunder Frank

A readable and stimulating collection of essays which focus on the present world economic and political crisis.

£7.95 cased 09 144990 1 192pp

£3.95 paper 09 144991 1 192pp

Hutchinson Education

100 Convent Street, London W1P 6UD

Job evaluation

Free Enterprise, Fair Employment
by Elliott Jacques
Heinemann Educational, £9.50
ISBN 0 8448 1417 1

Economists are divided between those who believe that labour is simply like any other commodity, the price and quantity of which are established by the forces of supply and demand, and those who seek explanations of these outside the confines of the discipline by reference to one of a range of non-economic theories that are currently on offer.

Over the past decade non-economic theories of wage determination have been treated with disdain by the majority of economists who have argued that wage and price inflation could be easily explained by reference to economic considerations alone; this tendency was reflected in the conversion of a majority of the profession to monetarism. Recently, however, the tide has turned. The persistence of stagflation has undermined the naive belief in market clearing that underpinned many of those features of the labour market that institutionalists have emphasized for so long.

Professor Jacques brings to this debate the perspective of the social psychologist. More importantly, by drawing together the several strands of his influential and innovative work into pay and employment he presents a wide-ranging set of proposals which he suggests will ensure non-inflationary full employment. The author sets out to demonstrate "why Keynesian and Friedmanite solutions" to problems of inflation and unemployment "must fail". Given the urgency of these problems today any book making such claims deserves consideration. In truth, however, it fails to substantiate them.

Little of what Jacques has to offer in this volume is new. Every element of the scheme he outlines has a familiar ring. He argues in common with at least one prominent strand of Keynesian thought and, perhaps, Keynes himself, that wage inflation is the product of the competitive levelling of pay settlements; of different bargaining groups trying to ensure they maintain their position in the pay hierarchy. In common with many of those who advocate an income policy he proposes the adoption of a national job evaluation scheme which harnesses the as yet "unrealized" consensus on the appropriate structure of pay differentials which exists in this country.

The evidence for this consensus emerges, he suggests, from his extensive research into the field of payment systems and is clearly essential to the success of his proposal. He proposes that such a scheme should be established in the context of the deliberations of a council of wise men who are charged with determining the feasible rate of advance of the average level of pay in the light of general economic prospects and the prevailing consensus on the degree of income inequality. Finally, he suggests supporting this with public legislation enforcing a national job evaluation scheme which employs his own notion of "the time-span of discretion" (the time-span of discretion he defines as "the maximum period during which an employee is targeted to exercise discretion within prescribed limits") and "representative deep and previously unrecorded sense in people about a fair distribution of wages and salaries and thus can be employed to erect a non-inflationary pay structure".

He points out that the employment contract for most workers results in a quasi-permanent relationship between worker and employer which is quite unlike the anonymous and impersonal relations that are assumed in the classical economic theory of the labour market. Thus social attitudes and conventions mediate the relationships between employers and employees and of these, considerations of fairness are paramount. Considerations of fairness and justice affect employees' perceptions of the appropriate structure of differentials between jobs at different levels of the occupational structure while "employees who are employed at the same level of work have the same standards of what would be fair payment for that work", the same "felt-fair pay". Few economists would disagree with either of these propositions. What has to be resolved is what constitutes the same level of work, and having determined this, which notion of fairness workers employ in evaluating their rewards. Jacques' answer to the first of these is the time-span of discretion which is "derived simply by establishing with a manager or subordinate those assignments or sequences of assignments that have the longest maximum target completion time" and to the second that "people who are employed at the same time-span named the same felt-fair pay" regardless of any other specific features or circumstances of the job.

Those offering an alternative interpretation of employment relations, namely economists, would dispute that the notion of the time-span of discretion captures and therefore rewards all those elements that are essential for an efficient allocation of labour and hence a healthy economy. Moreover the economist's notion of the equalization of net advantages across different employments draws attention to the wider range of factors which in practice determine pay levels. Nor is their theory devoid of considerations of fairness, for as it does on equal reward for work of

equal value. Their theory also attempts to explain rewards in every employment - in contrast to that of Jacques' which in its application to self-employed persons, and extension, those in small time enterprises, different from those of employees. The arguments are hardly convincing, but they emphasize the fact that this scheme assigns a minor role to productivity considerations, for these are seen as captured in the time-span of a job, and establishes a tenuous link between reward and training.

Jacques' notion of the time-span of discretion is none the less an important and provocative view of the aspects of work that need to be rewarded to ensure economic and social efficiency. On the subject of pay Jacques is interesting and stimulating, but the supporting evidence he advances in favour of employment is frankly naive. For example are we to make of the advocacy of reflationary public works programmes financed out of current taxation? Unless this taxation is levied wholly out of savings (in which case what happens to flow of funds to the private sector for investment purposes?) this is unlikely to provide any significant stimulus to employment.

The book is unlikely to convince most readers that the author has established the case for abolishing the market for labour, as he does or indeed that this is desirable. However in raising the matter he has directed attention to the issue which lies at the heart of some of the most important problems confronting society today.

R. F. Elliott

R. F. Elliott is lecturer in the economy at the University of Aberdeen.

THE ECONOMISTS' BOOKSHOP

FAST SELLING ECONOMICS TITLES FROM THE SPECIALISTS IN THE FIELD

* BRANDT Commission 1983 Common Crisis North-South: Cooperation for world recovery (Pan) £1.95 (+ £0.60 p&h)

* van Duijn *The Long Wave in Economic Life* (Allen & Unwin) £6.50 (+ £1.25 p&h)

* Sohmpeter (ed) *History of Economic Analysis* (Allen & Unwin) £25.00 (+ £1.95 p&h)

THE ECONOMISTS' BOOKSHOP
Clare Market, Portugal Street, London WC2

Open 9.30-6.00 Monday-Friday
10.00-1.00 Saturday (LSE term time)
Tel: (01) 405 5531

If you don't already receive it, write today for a copy of our catalogue Social Science Selection Guide.

Addison-Wesley Publishers

A new approach to third world economics

INTEGRATED ECONOMICS:
A Study of Developing Economies

Professor O. Abovade, University of Ibadan

This important text presents a fresh approach to teaching economics at first year undergraduate level in African universities. It also offers an alternative perspective for development economics courses in undergraduate courses everywhere.

Courses based on the standard Western texts fail to address the fundamental problems of African economies. This text brings a greater relevance and realism to teaching programmes by outlining the historical setting and institutional environment of African development.

57pp/11in x 8 1/2 14088 3/hard/£18.50
1201 14087 5/paper/£9.95

Available through your usual supplier or direct from:

Addison-Wesley Publishers
53 Bedford Square, London WC1B 3DZ

CLASSIFIED ADVERTISEMENTS

The Times Higher Education Supplement

To place advertisements write to or telephone:

The Advertisement Manager,
The Times Higher Education Supplement,
Priory House, St John's Lane, London EC1M 4BX.
Tel: 253 3000. Telex 264971

Rates:	Copy deadlines:
Classified Display - £9.50 paco Min. size: 9cm x 1 col @ £85.50 Classified Linage - £1.85 per line Minimum 3 lines @ £5.55 Box number - £2.00	Classified Display: Friday in the week prior to publication Classified Linage: Monday 10.00 am in the week of publication

Universities

UNIVERSITY OF MALAYA

Applications are invited for the following posts:

CHAIRS

FACULTY OF ENGINEERING:

Chair of Chemical Engineering

Chair of Materials Science

Chair of Mechanical Engineering

Chair of Metallurgy and Materials

Chair of Polymer Science

Chair of Structural Engineering

Chair of Thermal Engineering

Chair of Transport Engineering

Chair of Vehicle Engineering

Chair of Welding Engineering

Chair of Engineering Materials

Chair of Engineering Design

Chair of Engineering Management

Chair of Engineering Education

Chair of Engineering Research

Chair of Engineering Development

Chair of Engineering Innovation

Chair of Engineering Entrepreneurship

Chair of Engineering Leadership

Chair of Engineering Creativity

Chair of Engineering Vision

Chair of Engineering Inspiration

Chair of Engineering Imagination

Chair of Engineering Intuition

Chair of Engineering Instinct

Chair of Engineering Insight

Chair of Engineering Intellect

Chair of Engineering Intelligence

Chair of Engineering Ingenuity

Chair of Engineering Invention

Chair of Engineering Innovation

Chair of Engineering Entrepreneurship

Chair of Engineering Leadership

Chair of Engineering Creativity

Chair of Engineering Vision

Chair of Engineering Inspiration

Chair of Engineering Imagination

Chair of Engineering Intuition

Chair of Engineering Instinct

Chair of Engineering Insight

Chair of Engineering Intellect

Chair of Engineering Intelligence

Chair of Engineering Ingenuity

Chair of Engineering Invention

Chair of Engineering Innovation

Chair of Engineering Entrepreneurship

Chair of Engineering Leadership

Chair of Engineering Creativity

Chair of Engineering Vision

Chair of Engineering Inspiration

Chair of Engineering Imagination

Chair of Engineering Intuition

Chair of Engineering Instinct

Chair of Engineering Insight

Chair of Engineering Intellect

Chair of Engineering Intelligence

Chair of Engineering Ingenuity

Chair of Engineering Invention

Chair of Engineering Innovation

Chair of Engineering Entrepreneurship

Chair of Engineering Leadership

Chair of Engineering Creativity

Chair of Engineering Vision

Chair of Engineering Inspiration

Chair of Engineering Imagination

Chair of Engineering Intuition

Chair of Engineering Instinct

Chair of Engineering Insight

Chair of Engineering Intellect

Chair of Engineering Intelligence

Chair of Engineering Ingenuity

Chair of Engineering Invention

Chair of Engineering Innovation

Chair of Engineering Entrepreneurship

Chair of Engineering Leadership

Chair of Engineering Creativity

Chair of Engineering Vision

Chair of Engineering Inspiration

Chair of Engineering Imagination

Chair of Engineering Intuition

Chair of Engineering Instinct

Chair of Engineering Insight

Chair of Engineering Intellect

Chair of Engineering Intelligence

Chair of Engineering Ingenuity

Chair of Engineering Invention

Chair of Engineering Innovation

Chair of Engineering Entrepreneurship

Chair of Engineering Leadership

Chair of Engineering Creativity

Chair of Engineering Vision

Chair of Engineering Inspiration

Chair of Engineering Imagination

Chair of Engineering Intuition

Chair of Engineering Instinct

Chair of Engineering Insight

Chair of Engineering Intellect

Chair of Engineering Intelligence

Chair of Engineering Ingenuity

Chair of Engineering Invention

Chair of Engineering Innovation

Chair of Engineering Entrepreneurship

Chair of Engineering Leadership

Chair of Engineering Creativity

Chair of Engineering Vision

Chair of Engineering Inspiration

Chair of Engineering Imagination

Chair of Engineering Intuition

Chair of Engineering Instinct

Chair of Engineering Insight

Chair of Engineering Intellect

Chair of Engineering Intelligence

Chair of Engineering Ingenuity

Chair of Engineering Invention

Chair of Engineering Innovation

Chair of Engineering Entrepreneurship

Chair of Engineering Leadership

Chair of Engineering Creativity

Chair of Engineering Vision

Chair of Engineering Inspiration

Chair of Engineering Imagination

Chair of Engineering Intuition

Chair of Engineering Instinct

Chair of Engineering Insight

Chair of Engineering Intellect

Chair of Engineering Intelligence

Chair of Engineering Ingenuity

Chair of Engineering Invention

Chair of Engineering Innovation

Chair of Engineering Entrepreneurship

Chair of Engineering Leadership

Chair of Engineering Creativity

Chair of Engineering Vision

Chair of Engineering Inspiration

Chair of Engineering Imagination

Chair of Engineering Intuition

Chair of Engineering Instinct

Chair of Engineering Insight

Chair of Engineering Intellect

Chair of Engineering Intelligence

Chair of Engineering Ingenuity

Chair of Engineering Invention

Chair of Engineering Innovation

Chair of Engineering Entrepreneurship

Chair of Engineering Leadership

Chair of Engineering Creativity

Polytechnics continued

Senior Lecturer 'A' in Home Economics

(Post Ref: 83/4)
£11,700 (x3)-£12,987 (Bar)
(x4)-£14,748

Applications are invited for the above post which is primarily concerned with the further development of the B.A. Degree course in Home Economics. In addition to being the Course Leader, the successful applicant will be expected to take advantage of opportunities available in research, consultancy and personal development.

Further particulars and application forms are available from The Secretary and Treasurer (Staffing), The Queen's College, Glasgow, 1 Park Drive, Glasgow G3 8LP, or telephone 041-534 8141, Ext. 27.

The closing date for this post is Monday, 14th March 1983.

THE QUEEN'S COLLEGE GLASGOW
1 Park Drive, Glasgow, G3 8LP.
Tel: 041-534 8141.
A Scottish Central Institution.

TESSIDE POLYTECHNIC
DEPARTMENT OF ELECTRICAL, INSTRUMENTATION AND CONTROL ENGINEERING
INFORMATION TECHNOLOGY INITIATIVE

The Department has recently received substantial government support for expanding its activities in Information Technology. This expansion will lead to increasing numbers of students on the BSc (Hons) in Computer Technology and to mounting a new Higher Diploma in Computer Technology. The Department will also undertake significant research work in the new BSc in Information Technology of the Department of Computer Science.

The Computer Technology degree combines computer hardware and software engineering and includes some engineering and electronics, especially digital systems. It is a new degree in the Department of Computer Science.

Candidates for the post of Principal Lecturer should possess a good Honours degree in a field related to computer engineering and/or electronics, especially digital systems. They should also possess a Higher Diploma in a relevant area and should have several years of recent experience in a field of computing, preferably including microcomputer engineering applications.

Candidates for the Senior Lecturer/Assistant Lecturer post should possess a good Honours degree in one of the disciplines mentioned above.

The successful applicants will be expected to contribute to the research and industrial consultancy activities of the Department.

DEPARTMENT OF COMPUTER SCIENCE
INFORMATION TECHNOLOGY INITIATIVE

Applications are invited for the post of:

Principal Lecturer and 2 Lecturer/Assistant Lecturer.

Candidates for the Principal Lecturer post should have a specialist interest in one or more aspects of Information Technology.

Applications for the post of Lecturer/Assistant Lecturer should be able to contribute to the teaching and research or development work of the Department in one or more of the main areas of computer science: computer systems, computer architecture, languages and compilers, programming, data processing or graphics.

Salary £11,500-£13,200 (work bar) - £15,018 per annum. The salary on appointment will be no greater than £13,200 per annum.

Lecturer/Assistant Lecturer: £9,500-£10,173 (work bar) - £12,210 per annum. The salary on appointment will be no greater than £10,173 per annum.

Further particulars and application forms are available from the Personnel Section, TESSIDE POLYTECHNIC, Borough Road, Letchworth, Herts SG8 2AA. Tel: 0462 510000. Closing date for applications - 18 March 1983.

City of London Polytechnic
Re-Advertisement
HEAD OF DEPARTMENT POST, GRADE V

Applications are invited for the post of Head of Department of Information Technology. The successful candidate will be responsible for the development of the Department and will have a major role in the development of the Department's research and consultancy activities.

The successful candidate will be responsible for the development of the Department and will have a major role in the development of the Department's research and consultancy activities.

Further particulars and application forms are available from the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341. Closing date for applications - 18 March 1983.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

For further particulars of the post and the Polytechnic, please contact the Personnel Section, City of London Polytechnic, 100 Abchurch Lane, London EC4N 3DF. Tel: 0779 2341.

Colleges of Technology



EAST SUSSEX COUNTY COUNCIL
HASTINGS COLLEGE OF ARTS & TECHNOLOGY
HEAD OF DEPARTMENT

Engineering and Science (Grade V)

To start 1st September 1983. Full details and application form from the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

Closing date for return of application forms Wednesday, 16th March 1983. Interview dates 20th/21st April, 1983.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

For further particulars of the post and the College, please contact the Principal, Hastings College of Arts & Technology, Archway Road, St. Leonards-on-Sea, East Sussex TN38 9HX. Tel: Hastings (0424) 42047.

Robert Gordon's Institute of Technology
Aberdeen
School of Mathematics
Computer Studies

SENIOR LECTURERS

Senior Lecturer (2 posts) to develop CNA degree courses in Computer Science, Computer Systems Design and Implementation, and to supervise academic/practical experience in these fields relating to software engineering, real time and expert systems. Developments envisaged will follow a strong technical bias with particular emphasis on practical aspects.

Good Honours degree in Computer Science/Computer Studies or allied discipline, or considerable industrial experience required.

Salary range: £11,700-£14,748 per annum.

LECTURER

Lecturer to teach programming, use of software systems and microcomputer systems to a wide range of students. Interest in operating systems and/or graphics encouraged.

Good Honours degree in Computer Science/Computer Studies or allied discipline, or considerable industrial experience required.

Salary range: £7,956-£12,551 per annum.

Assistance with removal expenses.

Details from Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

For further particulars of the post and the Institute, please contact the Secretary, Robert Gordon's Institute of Technology, Schoolhill, Aberdeen AB9 8QS (0224 533111).

ilea Inner London Education Authority

AVERY HILL COLLEGE
Baxley Road, Eltham SE9 2PQ. 01-850 0081

Vice-Principal (Academic)
from September 1983

Avery Hill College is a diversified College of Higher Education with a variety of degree and diploma courses, a substantial number of which are related to teacher education and validated by CNA.

The person appointed to this post will be responsible for the Principal for the overall management of the academic work of the College and, in particular, will be required to make a substantial contribution to the College's internal validation and evaluation procedures.

Salary £18,590 plus £834 Inner London Allowance (subject to formal approval). It is anticipated that the College will soon be upgraded to VI.

Further details and forms available from the Clerk to the Governors at the College, to whom completed forms should be returned by 18 March.

ilea is an equal opportunities employer

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

For further particulars of the post and the College, please contact the Clerk to the Governors, Avery Hill College, Baxley Road, Eltham SE9 2PQ. Tel: 01-850 0081.

Don's diary

I feel odd in shorts. Odder still to look at (say my children). A bit like a Michelin man with bare legs. Still, it is 80° outside - and inside for that matter. A month in Jamaica to work on a new edition of my first book: 15 years since my first visit. I forget lots these days, including just how spectacularly beautiful this troubled island is. I'm in the middle, on the only thriving sugar estate - a luxurious valley, deep in ripe sugar cane and rimmed by encircling mountains. But let me record two highlights of last week. Exchanged words with two stars. Jimmy Young on the plane; greatly reassured to find he's no taller than me. T.T.F.N. And with Laurie Taylor. I'm clearly upwordly mobile.

A good first week on estate pupers trying to disentangle the miserable recent history of sugar. The tropics impose their own routine. Brilliant early morning sun dictate early starts - which suit my normal routine; then lunch and siesta, and afternoon work. Then the round of drinks and dinner. It's a bit like dog-days, bumping into the same people at different angles. End the week meeting my family. Here for two weeks, then to friends on the coast; their house perched above perfect beach. Five hundred yards out, the surf breaks colour from light to dark blue. Even my younger son seems impressed.

Spend the week compiling statistical tables and graphs: a date book for next year's writing. My family are busy relaxing and enjoying themselves. So I press on uninterrupted and by Xmas Eve have an outline chapter ready. Break up, enjoy the elaborate celebrations and feasting my seventh Jamaican Xmas. We eat to the inopportune croning of "Jack Frost nipping at your nose". "White Xmas" and other such tropical sentiments.

Xmas to New Year. Write up the material outlined in the last two weeks. And it makes depressing reading. Faced now with two jobs - I dislike editing down and typing up. On New Year's Eve, I dispatch my family on to the London plane and head back for seaside celebrations. Thought I was the worst dancer in the Caribbean until I was assaulted by another Englishman even more graceless and uncoordinated than myself. New Year comes in on a flawless night and we go for a less-than-sober midnight swim. A wonderful sensation.

In danger of going grey



Timothy Healy

During this session the Congress will debate the nation's mandatory retirement age from 70 to something lower, to eliminate it altogether. The pressure is to push to 65, but the University Grants Committee is pushing for 60.

quite unlike Blackpool south shore. End the week celebrating my birthday, at a party thrown for a one-year-old, a five-year-old - and me. They had the grace to decorate my cake with Roman numerals.

Re-reading what I have recalled so far, it gives little impression of work: to re-assure myself, and both my readers, let me repeat - I have worked hard. There are 15,000 words in the book. But they will be blizzed by my co-author who manages to reduce my tight crisp prose to something approaching literary anorexia.

I did not take long to get down to the routines I love best and which, now, I simply can't abandon. Here, and at home, I begin early each morning with a blank sheet - and try to write till noon. And always, the same quirks and foibles surface: date in the top left hand corner; footnotes written at the bottom, working upwards (and therefore, if you follow backwards) till they bump into the advancing text. With a first draft finished I then read my illegible writing utterly indecipherable by deletions, transpositions and corrections. Then I type. But of course, since no one else can read it, I have to type my own manuscripts - though at this stage the actual writing is finished and I am itching to start writing again. Then the hand-written draft is added to the neat pile of drafts I have accumulated since my first thesis writing in 1966. In fact every single sheet I have ever written now forms a pile, learning against my filing cabinet.

Finished! My chapter is down to size, the tables, graphs, assembled and in place - no more tinkering. As I line up the final chapters, a poor young man comes to have me correct his uncut diamond of a letter (to my co-author). We befriended him when he was a small boy playing in my garden. I persuade him to leave his letter as it is. He persuades me to give him my watch. I have given two shirts and running shoes (in which, of course I have never actually run) to his friend. My mild's promised to the maid. My worldly goods are disappearing fast. If you see what looks to a distressed academic at Heathrow, I am only in underclothes and raincoat. Kindly put me in the York train.

James Walvin

The author is reader in history at the University of York.

Does life hold any more surprises? What would one read if one had more time? When I retire I will really read all of Kant and Hegel and great classic novels that somehow one never got around to, like... I would be ashamed to name names, not having read everything, unlike those calmly omniscient Celtic beings who present or appear in *Kaleidoscope* or *Bookshelf*.

But perhaps it may never happen. When I was eleven, I was sure that the future held employment and with it the capacity to buy endless quantities of off-ratio sweets; but when the time came, sadly the taste had gone.

So perhaps I will never read Tolstoy, finish Dickens, sample Anthony Burgess, meet Bernard Levin, tour Greece or set out as if for Bayreuth.

However, life does hold surprises. For one Saturday night, finding that Pinter tickets at the National weren't available for love, money or influence, I asked our secretary (it's not true that some habits of business efficiency don't penetrate academia) "to try the RSC, whatever's going on." "Anything! Don't you know what's on?" "It is bound to be Shakespeare. Oh, it's *Winter's Tale* or something else." "All's well that ends well," she told me later as I put my tenpence into the company telephone tin.

Who can ever remember which play goes with which title? *Much Ado About Nothing*, *Love's Labour's Lost*, *Brave New World*, *As You Like It*, *All's Well That Ends Well*, *The Magic Mountain*, *The Comedy of Errors*, *Spring Awakening*, *Measure for Measure* and *Two Gentlemen of Verona*. I suspect that even my colleagues in English have to glance at their notes occasionally. I'm only really secure about the *Merry Wives of Windsor*, *Twelfth Night* and *The Taming of the Shrew*. So what an utter shock as an old RSC fan to see, and at my age, a major Shakespeare play for the first time!

And not to have a clue what was going to happen next! The uncertainty was the deeply marvellous thing. It is not often that the wonder of the stage can be asserted against prior knowledge of the text. No wonder God wished that Eve had not eaten the apple. Eating it ended spontaneity and delight and led to universities and the Dewey Decimal system.

Teaching Shakespeare too early in the schools kills him in the theatre. I've often thought that Hamlet would work better as drama than as text, such desperate overacting, gazing if only one didn't know that the ghost was a good ghost and not "a poor old man" (like an opera programme) and that it is a difficult play. In one sense, it is not a difficult play, as a fairy story, a strange and rich, mythic fiction which cannot be reduced to naturalistic terms or given plausible psychology for the leading characters.

Initially I shuddered when I saw the costumes were *Empire* as they had been four years ago for *Leor*.

It seems to me that the end of tenure would involve three serious losses. Extended contracts might well last longer than tenure itself and slow down the periodic renewal of any department or of an entire faculty. The ideal is that a quarter of any faculty group change over each decade. Until now the usual length of faculty service has been close to 40 years, and so a department of 40 members can count on having about 10 younger faculty members each decade who bring with them the latest teaching of the graduate schools, as well as the "state of the art" in research and fashion. Extend the service of faculty members to 50 years or more and this renewal process grinds to a halt.

I changed in the retirement age would slow down or stop a second kind of renewal that faculties have been using upon themselves for the past decade. Thirty years ago American faculties with notable exceptions like *Yale* and *Columbia* in New York were largely male and almost exclusively white. For a decade have been made up of the past few years appointing women and minority group members to the faculty. Progress has been slow, but it has been steady. The change to retirement would slow it almost beyond bearing. Let me give a practical example.

George Town University's central faculty (excluding the faculties of law, dentistry and medicine) has 40 members. Under the present policy for retirement from 1983 and the year 2000 Georgetown will have 20 retired faculty members to replace our replacements between now and the end of the century drop to 20. Georgetown will have during the next 17 years only eight faculty members to replace.

After all, the play's the thing



Bernard Crick

the Countess of Rossillion. The countess's son, Bertram, with whom Helena is secretly in love, leaves Rossillion to serve at the French court. The King of France is gravely ill and Helena journeys to the court to try and cure him with one of her father's remedies. When the king recovers he offers to grant her a boon - Helena asks for Bertram in marriage and the king consents.

Bertram, however, is outraged at being commanded to marry a commoner. He goes through with the ceremony but swears he will not accept Helena as his wife until she performs the impossible - to wear his ring and conceive his child, neither of which he will ever give her. He immediately sets off for the wars in Italy with his companion Parolles. Helena follows him to Florence disguised as a pilgrim, and learning of his passion for a local girl, Diana, substitutes herself in Bertram's bed and obtains his ring as a pledge. The boasting Parolles is caught in a trap laid by his doubling comrades. He is exposed as a coward and no gentleman. Believing Helena to be dead, Bertram, triumphant in the war, returns to Rossillion where he is confronted by Helena, who is pregnant and wearing his ring.

That is a good summary, from the RSC's programme - a helpful one, for it is assumed both that few people know what the plot is about (like an opera programme) and that it is a difficult play. In one sense, it is not a difficult play, as a fairy story, a strange and rich, mythic fiction which cannot be reduced to naturalistic terms or given plausible psychology for the leading characters.

Initially I shuddered when I saw the costumes were *Empire* as they had been four years ago for *Leor*.

It seems to me that the end of tenure would involve three serious losses. Extended contracts might well last longer than tenure itself and slow down the periodic renewal of any department or of an entire faculty. The ideal is that a quarter of any faculty group change over each decade. Until now the usual length of faculty service has been close to 40 years, and so a department of 40 members can count on having about 10 younger faculty members each decade who bring with them the latest teaching of the graduate schools, as well as the "state of the art" in research and fashion. Extend the service of faculty members to 50 years or more and this renewal process grinds to a halt.

I changed in the retirement age would slow down or stop a second kind of renewal that faculties have been using upon themselves for the past decade. Thirty years ago American faculties with notable exceptions like *Yale* and *Columbia* in New York were largely male and almost exclusively white. For a decade have been made up of the past few years appointing women and minority group members to the faculty. Progress has been slow, but it has been steady. The change to retirement would slow it almost beyond bearing. Let me give a practical example.

George Town University's central faculty (excluding the faculties of law, dentistry and medicine) has 40 members. Under the present policy for retirement from 1983 and the year 2000 Georgetown will have 20 retired faculty members to replace our replacements between now and the end of the century drop to 20. Georgetown will have during the next 17 years only eight faculty members to replace.

brilliant symbols of eutocracy in the early sciences, hopelessly specific clichés in the anguished metaphysical scenes that step out of time and space (was I the only person who couldn't take seriously Sweden's Lear in the heat in combination and poor Curdella returning in a khaki uniform with bandolier). But this time it worked, or rather it didn't matter so long as the constant conveyed the high style of a court and a courtier or a knight and a knight's errand. The old characters all radiated benevolence. Isn't it the only Shakespeare play in which this is so? Whereas the younger generation, headed by Bertram, are ill brash, not fully formed, threatening (in the eyes of both the king, the countess and their closest companions) to become arrogant, careless of human values. The younger courtiers, nowhere near, as yet corruption and wickedness (as in the old ballad, once again "The Old Courtier and the New"), but men to make none the less.

Bertram's companion, Parolles, is the only wicked young character - Falstaff turned sour even before the big belly grows. Only the older generation radiate, if apprehensively, benevolence and magnanimity.

The play is difficult, however, the plot suggests, in the character of Helena. Harriet Walter plays her beautifully and convincingly as a fairy princess, a Cinderella with a man's will, but not strident; full of true love, benevolence like the elders, and constancy of purpose: a triumphant assertion that woman can triumph over man. The play is made apt to the play and mythic rather than true to life, so coarseness or shock, only gentle, clever, table-turning persistence.

Yet it could all be played very differently: a person of iron will, more often associated in the past and elsewhere with a roguish male libido, someone who hurls down her man and ends revenge, a come-hither of "nursing" male value, suddenly ceases to be funny, the woman, the shrew, the tamer, the All and the end, the King's complement, following Bertram's escape and declaration of love, it is All yet seems well, and if I had more...

The latter part, more welcome to the sweet.

"Seems well," my lords, and "I end so sweet." My ladies, there is much ground for expecting trouble ahead between the sexes as the great reconciliation scene will follow. Is it "they all lived happily ever after" or more Brach-like "happy ending to our story, but in real life...?" Either is possible. The makes a good play, even a great play. Especially if one comes to it without preconceptions and leaves thoughtful and a little wiser, well as delighted, then reading the text (instead of the Sunday paper) afterwards and not before.

Turkish dismissals

Sir, - You report (*THE*, February 18) that 200 Turkish university teachers have been dismissed during the present academic year. It is clear that a political purge is under way, and that the Turkish military authorities are systematically eliminating university autonomy and academic freedom. Many more Turkish academics are being intimidated into resigning their posts (under threat of dismissal and loss of pension). Another, like the economist Dr Yavuz Kucuk, have been imprisoned by the martial law authorities.

An attempt is now being made to enlist the support of British universities for this policy of repression. At the invitation of the British Council in London, two representatives of the authoritarian Turkish university system are currently making a tour of British universities and research institutes. They are the directors of the institutes of physical and social sciences at Middle East Technical University, Ankara: Dr Kemal Guruz and Dr Yavuz Tezel.

Dr Guruz and Dr Tezel have emerged as key figures in the policy of imposing military controls on the Turkish universities. They represent (in the words of a British Council document) the "firm policy line" dictated by the Turkish higher education council. The higher education council is directly responsible for the policy of dismissing university teachers who do not support the military regime.

It is surprising that the British Council appears to be supporting these repressive policies by inviting Dr Guruz and Dr Tezel to Britain. But the aim of their visit is even more sinister. It is to recruit the members of the British Council to identify individuals (to Britain) who would be prepared to lecture for short periods at Middle East Technical University. In short: to recruit black labour to replace Turkish university teachers who have been summarily dismissed.

Under normal circumstances, one would welcome cooperation between British and Turkish universities (I myself have been a visiting lecturer in Ankara). But the circumstances are not normal. What is happening in Turkey bears a sinister resemblance to the *Gleichschaltung* of German universities in the 1930s.

May I urge members of British universities to express their opposition to these policies by writing to the British Council, 10 Spring Gardens, London SW1, and to the Turkish Ambassador, 43, Belgrave Square, London SW1. Yours sincerely, E. F. TIMMS, Goethe and Calus College, Cambridge.

Legal training

Sir, - Mr Robert Elliot (*THE*, February 11) has some harsh words which appear to be aimed at the bodies responsible for the vocational training of entrants to the two branches of the legal profession in England and Wales when he refers to "law graduates finding themselves squeezed out of training places". He goes on to refer to what he sees as a chaotic system of legal education and training.

In September 1982 3,304 students started on courses in preparation for the final examination at the College of Law or at one of the seven polytechnics approved for the purpose. Prior to that in 1982, 2,613 law graduates had applied for and been granted certificates that they had obtained qualified law degrees and thereby completed the academic stage of training. Non-law graduates must pass a common professional examination in the six "core" legal subjects before they can attend the final course. True, there are also school-leaver entrants. In 1982, 3,304 received certificates of eligibility to start training as would-be solicitors.

If Mr Elliot favours an all-law graduate entry to the legal profession the Law Society must respectfully disagree with him. Those of us who are in the industry of the law must have to work hard to avoid the greying of the nation's courts and universities.

LETTERS TO THE EDITOR

The state of English, as she is taught

Sir, - So there is "a crisis of English" (*THE*, February 11). There are university students of English who have not read *The Waste Land*, the *Ode to Annum* and *Dombey and Son* (David Holbrook), others by whom "sentences of any complexity are simply perceived as unreadable" (Colin McCabe). Eminent teachers of English are impelled to theorize abstrusely about the nature of their enterprise. May not the underlying reason for all this be that literary studies in our universities cannot really carry the weight they are expected to bear?

Myself a former and disillusioned teacher of literature (not English), I came many years ago to a conclusion that is by no means novel and is, I rather think, shared by many people who are not for that reason to be dismissed as illiterates or philistines: namely, that the proper place of literature is marginal, not central, and that there is no justification for providing for large numbers of students three-year courses in which the study of literature predominates.

And, in the irresponsibility of my retirement, I amuse myself by imagining schools of English (and, *mutatis mutandis*, of French, of German...) very different from those we have known for so long. Their object would be the study of England and the English. So the geography of the country, its history, its institutions, and its legal, political, economic and social structures would all have an important place in the syllabus. Literature and the arts would figure there also, for the whetting of appetites and with no examinations. But a compulsory and integral part of the course would be extensive direct experience, acquired during vacations, of the land and the people. No student would graduate without having travelled north, south, east and west, in search not of beauty spots and stately homes but of everyday realities. And not simply as remote spectators. Young ladies and gentlemen delicately nurtured in

the south of England would do a spell on a production line in Coventry, with a community project in non-European Bradford, or in a supplementary benefits office in the Welsh valleys or Strathclyde. Lenses and lads from Teesside would find themselves jobs in the bars of the Imperial Hotel in Torquay.

The recruitment of graduates from such schools to (for example) the Civil Service, industry, the media and the teaching profession would, I persuade myself, have salutary effects. But I know very well where Utopia is.

Yours faithfully, L. C. SYKES, 3 Southmeads Close, Oadby, Leicestershire.

Sir, - Maureen Bell's claim (*THE*, February 18) that the restructuring of English studies in higher education advocated by such as Catherine Belsey will result in a liberated end democratic discipline is the reverse of the truth.

The changes proposed, with varying emphases, by Belsey and by a number of contributors - Widdowson, Hawkes, McCabe - to your symposium on "the crisis of English" (*THE*, February 11) will have, already having, the effect of denying both male and female students - especially working-class, state-educated students - access to the traditional resources of English literary culture: resources which include not only traditional texts (there is, of course, no rigid concern but some authors are better than others) but also traditional ways of reading and expending literature. If Belsey for instance had her way - and make no mistake, she, and those like her, are getting their way, in too many places - students will not be allowed (the prohibition will be subtle) to read the texts of, say, Leavis's "great tradition" except to deconstruct them. But they won't get much time even for that: where theory invades practice in the ways favoured by

Hawkes and Widdowson, students will be covertly coerced into reading Derrida, Barthes, Foucault, Lacan, or more probably, prompted by their reading lists, the vulgarizations of the ideas of these thinkers in, for example, some of the books in the "New Accents" series - edited by Hawkes, with contributions from Belsey and Widdowson. Literature will thus become even more of an elite prerogative than it is now, and may well only survive outside the higher education system. The "humility" that Maureen Bell preises is, in higher education at least, an arrogant contempt for the capacity of students to grasp traditional texts and contexts - a contempt strikingly evident in McCabe's contribution, worthy in parts of a *Black Paper* author, to your symposium.

Let me assert, however, to one comment that Widdowson makes in the symposium: the current debate in English studies is not primarily about "the value of critical theory in literature teaching". It is, in fact, about the survival of English as a serious force in higher education. It is astonishing but undeniable that there are now "lecturers in English" who are using the power granted them by the educational system which they affect to despise to destroy English as a discipline and to promote political views that would, as they well know, win little support in the wider community for which, according to Maureen Bell, they "care". Apathy, reactionary bores, liberal complacency, and intellectual laziness have allowed matters to reach this stage. It is time for those who sense the urgency of the situation - whether they are teachers, students, or members of the wider community - to start organizing more effective resistance to what is, despite its libertarian rhetoric, a bid for hegemony.

Yours faithfully, NICHOLAS TREDELL, 7 Donegal Court, Pembury Road, Langney, Eastbourne.

Police college

Sir, - Peter Dawson's letter (*THE*, February 11) raises fundamental issues for teachers and for trade unionists. There is a "democratic" problem between, on the one hand, academic matters and trade union matters, and on the other, academic considerations and moral/political considerations. The issues raised by Peter Dawson's letter relate to both.

First, surely John Fernandes was right to draw public attention to what were, by any standards, utterly racist sentiments expressed in the essays by some of the Hendon Police College cadets. Not an easy decision for anyone, and it is most commendable that the decision was made rather than to let pass. Unlike most student essays, these were part of a programme designed to equip policemen and women with the insights required to fit them for public duty. Whatever our personal reservations about the police in general, there can be little doubt that this is an issue of enormous public concern. Following Scarman it is sorely intolerable for these issues not to be brought into the next generation of police officers.

The "clash" or "uplift" of Brixton and Toxteth cannot be divorced from the responsibilities of academics and the formation of attitudes and ways of seeing and thinking. Implicitly, Peter Dawson's letter would suggest that sleeping dogs should be left to lie.

Second, what worth can be placed upon Nathe's fine record on paper against racism if it fails to deliver a member whose race epitomizes the issue itself? Of course, Nathe's official claims that the dismissal of John Fernandes by Commander Wells is a matter for casework, which is a singularly inappropriate way to tackle a matter of principle such as this. It is, in fact, a widely understood method of official union non-commitment: Nathe has got himself into an embarrassing situation by trying to maintain the principle but avoid the issue. We would have to avoid that both Nathe, generally, and

Aberdeen's delay

Sir, - John Hargreave's contribution to Don's Diary (February 11) certainly adds a new dimension to academic "aggression" that usually rather staid column. Might one add, regarding the meeting of Aberdeen University history department, so surprisingly held up to public attention, that quite contrary to what Professor Hargreave (who was not there) advances, the vote to delay for some months a final decision on the introduction of a new course was not a result of conservatism or timidity, brought about by a panic-stricken reaction to "the cuts". Rather it emerged from an interesting discussion in which our students were involved, as to the best means of examining this course. A subsequent meeting has abolished one final paper in favour of dissertation and, in a fortnight's time, we are to discuss abolishing or transforming another paper.

This would, no doubt, be of only peripheral concern, were it not for Aberdeen's prominent position in the north-west of Scotland. Since the "novel" of the "state of redundancy" discussions in the history department at least have begun once more to centre on intellectual issues, debated according to academic criteria. This is a step forward. However, after the trauma of last year, while the "battle for jobs" has been temporarily won (thanks, in no small measure, to the self-sacrifice of colleagues), there remains a battle for values of even greater moment. Some of us feel that, under the new regime, only research which is lucrative or which catches the attention of the media will be encouraged, to the detriment of no doubt old-fashioned scholarship. This impression, strongly held by many in Aberdeen, is perhaps shared by colleagues at other universities in a similar situation rather than a depressingly negative response.

Yours faithfully, WILLIAM SCOTT, Senior lecturer in history, University of Aberdeen.

Sarah Veale

Union View

A suitable case for chauvinism

Your average person in the street, if asked what the National Union of Students does, may well refer to our campaigning activities, quite possibly in a less than supportive way. We are sometimes accused of being ungrateful, wasting taxpayers' money, continually demonstrating our discontent with government policies, and so on. If such criticisms could see how national unions of students operate in many East European countries, they might begin to see these as positive aspects of NUSUK.

After attending a recent meeting of European National Students' Unions, I have become a NUSUK chauvinist. We are a student-led, democratic, truly independent organization. Our equivalents in East Europe are led by the same people, year after year, nearly always trainee diplomats, well versed in extolling the virtues of their own systems of government, most of whom have not been students for many years, and would not know a student problem even if it were allowed to identify one in such an international forum.

International meetings of student leaders are dominated by the determination of the Eastern

NUS

Bloc delegations to produce consensus documents. The problem is that they criticize Western systems, as indeed do we, but they refuse to allow (let alone introduce themselves) any such criticism of their own governments. NUSUK has always insisted that such meetings should be valuable opportunities for a frank exchange of opinions on general student problems, and not an exercise in diplomatic skills.

I simply do not believe that there are no social problems for students in East Europe, nor do I particularly want to sign documents on peace and disarmament that seek to place the entire blame for the arms race on the Western powers.

NUSUK has failed to get the format for such international gatherings significantly changed, and has therefore withdrawn its proposed candidacy to host the next European meeting in Britain and will be looking at the whole question of its future participation in such events. We would wish to maintain bilateral links with most national unions of students, but multinational gatherings are currently little more than junior (or not so junior) United Nations meetings, of little relevance to students as students.

NUSUK is in fact the only national union of students in the world which includes all post-school sectors of education and members of every conceivable political group; our structures are democratic and we are independent of the Government. There are certainly areas of criticism, but there are far greater areas of praise than even I, as an NUSUK full-time officer, realized.

Sarah Veale

The author is vice president (welfare) of the National Union of Students.